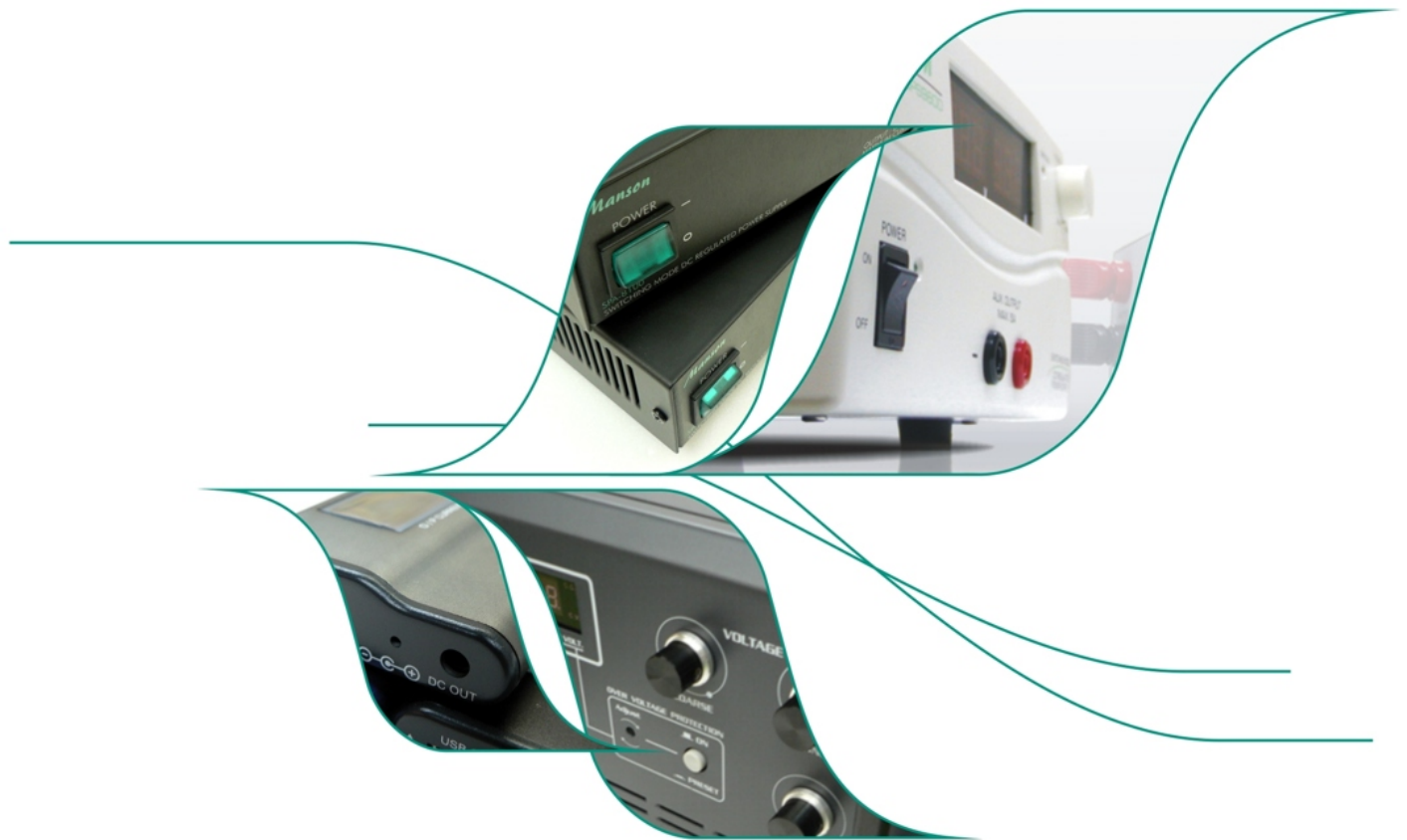


2007

CATALOGUE

SPECIALIZING IN POWER ELECTRONICS



Manson

MANSON ENGINEERING INDUSTRIAL Ltd.

Laboratory Grade, Triple Output, Dual Tracking DC regulated power supply

DPD - 1850 / 3030 / 6015 (Linear mode)

Description

The DPD series are intended for engineers who need a wide range of voltage and current to cover their applications with ease.

Double the voltage or current can be obtained in series mode or parallel mode respectively with the two independent and fully isolated outputs by the mode selector switch.

The master unit controls the combined outputs with accurate tracking capability.

Constant Current, CC and Constant Voltage, CV with automatic cross over are effective in all three modes.

To offer maximum versatility for electronic engineer, the DPD series have a third separate 5A, 1.5~6V adjustable output for old and new logic circuits such as Fast & LS TTL.

The current and voltage level of this third output can be read in the Master's LED meters.

The specifications of the line, load regulation and ripple and noise limits are comparable to if not better than the reputable make in the industry

Features

- Simultaneous digital metering of current and voltage.
- Twin 4 digit meters with large LED display.
- Selectable Switch for Normal and Series/ Parallel Dual Tracking modes.
- Precise control of voltage & current settings by wire-wound potentiometers.
- Laboratory grade line and load regulation and low ripple and noise.
- Variable Current Limiting with auto cross- over and indication (CC, CV)
- Third Output (AUX. : 1-6.5V , 5A) with display & overload LED.
- Retractable Alloy Handles.

Typical Applications

- Product Design
- Bench Calibration and Repair
- Manufacturing Production Tests
- Training.



All values are based on the Standard ambient Temperature 25°C and Pressure 0.1Mpa.

* SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE *

Specifications

	DPD-1850	DPD-3030	DPD-6015
Master / Slave Independent Output			
Output Voltage Range	0 - 18VDC	0 - 30VDC	0 - 60VDC
Load Voltage Regulation (0-100% Load)	≤0.01% + 3mV		
Line Regulation (±10% Variation)	≤0.01% + 3mV		
Ripple & Noise (RMS)	≤1mVrms		
Output Current Range	0 - 5ADC	0 - 3ADC	0 - 1.5ADC
Load Current Regulation	≤0.2% + 3mA		
Line Current Regulation	≤0.2% + 3mA		
Ripple Current	≤3mA rms		
Recovery Time	≤100μ second		
Series Mode Output			
Output Voltage Range	0 - 36VDC	0 - 60VDC	0 - 120VDC
Output Current Range	0 - 5ADC	0 - 3ADC	0 - 1.5ADC
Load Regulation	≤300mV		
Tracking Error	≤0.5% + 10mV		
Parallel Mode Output			
Output Voltage Range	0 - 18VDC	0 - 30VDC	0 - 60VDC
Output Current Range	0 - 10ADC	0 - 6ADC	0 - 3ADC
Load Regulation	≤300mV		
Tracking Error	≤0.5% + 10mV		
Auxiliary Output			
Output Voltage Range	1.5 - 6VDC		
Rated Output Current	5A (5A foldback limited)		
Load Voltage Regulation (0-100% Load)	≤10mV		
Line Regulation (±10% Variation)	≤5mV		
Ripple & Noise (RMS)	≤1mVrms		

General

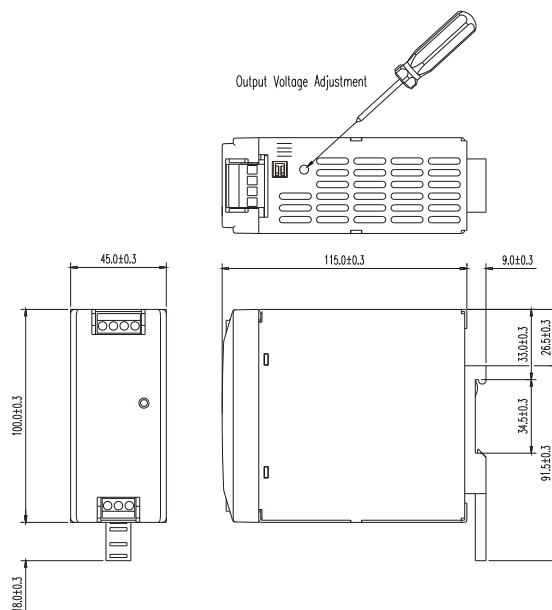
Selectable Input Voltage :	*110VAC / 120VAC / 230VAC / 240VAC
Meters & Displays :	*Frequency 50/60 Hz~ *C.C. & C.V. Indicators *4-Digit LED Meters *Voltmeter Accuracy ±0.5% + 2 Counts *Voltmeter Resolution 10mV *Ammeter Accuracy ±0.5% + 2 Counts *Ammeter Resolution 1mA *Master's Voltmeter & Ammeter switched to read Auxiliary output *Auxiliary Output Overload indication
Green LED :	*Withstanding test (60 second 1mA) 1500V :
Red LED :	Power cord to housing
Insulation :	Power cord to output terminal *Withstanding test (60 second 10mA) 500V : Output terminal to housing *Insulation Resistance at 500VDC : Housing to power cord 30 mega Ohm Housing to output terminal 30 mega Ohm
Cooling System :	*Fan Cool
Protection :	*Overload , Over Temperature , Short Current , Reverse Polarity , Input Socket with 8A Fuse
EMC & Electrical Safety :	*Designed & Manufactured to meet CE Standard
Dimension :	*379 x 280 x 135mm / 14.9 x 11 x 5.3in.
Weight :	*12Kgs / 26.4Lbs

36W Din-Rail Switching Mode Power Supply

DRS - 3600-05 / 3600-12 / 3600-24

Description

This range of compact DIN mounted switching mode power supplies are designed for a wide range of control equipments which demands good quality regulated DC power source with excellent EMC immunity and electrical performance in an industrial environment. Up to 5 units can be connected in parallel.



Specifications

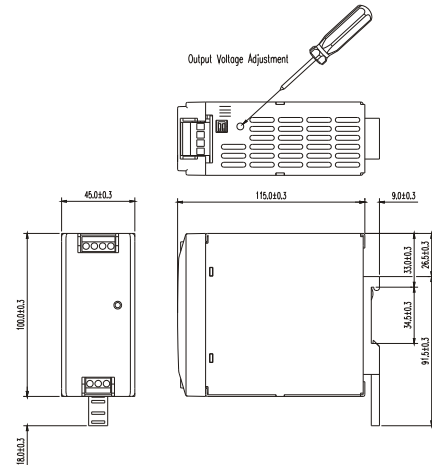
	DRS-3600-05	DRS-3600-12	DRS-3600-24
Voltage Range (Auto Select)	90 - 130Vac ; 180 - 260Vac		
Frequency Range	47 - 63Hz~		
Full Load AC Current	0.5A@100Vac ; 0.3A@230Vac	25mA@100Vac ; 30mA@230Vac	25mA@100Vac ; 30mA@230Vac
No Load AC Current	15mA@100Vac ; 30mA@230Vac		
Inrush Current , cold start @25°C *	10A@100Vac ; 25A@230Vac		
Leakage Current	2mA		
Efficiency	75%@100Vac ; 76%@230Vac	82%@100Vac ; 83%@230Vac	85%@100Vac ; 86%@230Vac
OUTPUT			
Nominal DC Voltage	5V	12V	24V
Voltage Adjust Range	4.2 - 6V	10.5 - 14V	21.5 - 28V
Rated Current	7.2A	3A	1.5A
Rated Power	36W		
Ripple & Noise (peak to peak)**	≤50mV		
Line Regulation	≤0.2%		
Load Regulation (10% - 100%)	≤0.8%	≤0.3%	≤0.3%
Hold-up Time (Full Load)	>20mSec@100Vac ; >30mSec@230Vac		
Parallel Operation	5 units max. user selectable		
PROTECTION			
Over Load / Over Current	8 - 10A, C.C., Auto-restart	3.5 - 4.5A, C.C., Auto-restart	1.7 - 2.0A, C.C., Auto-restart
Over Output Voltage	9 - 11Vdc	18 - 20Vdc	30 - 35Vdc
SAFETY & EMC			
Safety Standards	EN60950		
Withstand Voltage	I/P - O/P 3KVac ; I/P - F/G 1.5KVac ; O/P - F/G 0.5KVac		
Insulation Resistance	I/P - O/P, I/P - F/G, O/P - F/G 100Mohm and 500Vdc		
EMI Radiation & Conduction	EN55022 Class B		
Harmonics Current	EN61000-3-2, 3		
EMC Immunity	EN61000-4-2, 3, 4, 5, 6, 8, 11, EN55024		
ENVIRONMENT			
Working Temperature	EN60950 : -10°C to +60°C (UL508 : 0 to 40°C)		
Derating above 50°C	See Derating Curve		
Working Humidity	20 - 90 RH non-condensing		
Storage Temperature Humidity	-10°C to +80°C , 20 - 90 RH non-condensing		
GENERAL			
Switching Frequency @ Full Load	65 - 85KHz		
Case Material	Electro-Galvanized steel & Aluminum Enclosure and Poly-carbonate Front Panel		
Safety Class	Degree of Protection 1 (IEC 5360)		
Case Protection	IP 20 (IEC 529)		
Mounting	Snap on type with self locking can be installed on 35 mm Din-Rails / 7.5 or 15		
Connection	Screw terminals with double terminals for output		
REMARK	*Ta=25°C Cold start **100MHz Band width scope		

All values are based on the Standard ambient Temperature 25°C and Pressure 0.1Mpa.

* SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE *

Description

This range of compact DIN mounted switching mode power supplies are designed for a wide range of control equipments which demands good quality regulated DC power source with excellent EMC immunity and electrical performance in an industrial environment. Up to 5 units can be connected in parallel.



Specifications

INPUT

Voltage Range (Auto Select)
Frequency Range
Full Load AC Current
No Load AC Current
Inrush Current, cold start @25°C ★
Leakage Current
Power Factor
Efficiency

DRS-6000-05

90 - 130Vac ; 180 - 260Vac
47 - 63Hz~
1A@100Vac ;
0.5A@230Vac
15mA@100Vac ;
30mA@230Vac
15A@100Vac ; 30A@230Vac
2mA
min. 60%
75%@100Vac ;
76%@230Vac

DRS-6000-12

1.1A@100Vac ;
0.55A@230Vac
25mA@100Vac ;
30mA@230Vac
82%@100Vac ;
83%@230Vac

DRS-6000-24

1.1A@100Vac ;
0.55A@230Vac
25mA@100Vac ;
30mA@230Vac
85%@100Vac ;
86%@230Vac

DRS-6000-48

1.1A@100Vac ;
0.55A@230Vac
25mA@100Vac ;
30mA@230Vac
85%@100Vac ;
86%@230Vac

OUTPUT

Nominal DC Voltage
Voltage Adjust Range
Rated Current
Rated Power
Ripple & Noise (peak to peak)**
Line Regulation
Load Regulation (10% - 100%)
Hold-up Time (Full Load)
Parallel Operation

5V
4.2 - 6V
10A
60W
≤50mV
≤20mV
≤50mV
>20mSec@100Vac ; >30mSec@230Vac
5 units max. user selectable

12V
10.5 - 14V
5A

24V
21.5 - 28V
2.5A

48V
44.5 - 52V
1.25A

PROTECTION

Over Load / Over Current

10 - 13A,
C.C., Auto-restart
9 - 11Vdc

6 - 7A,
C.C., Auto-restart
18 - 20Vdc

2.7 - 3.5A,
C.C., Auto-restart
30 - 35Vdc

1.5 - 2A,
C.C., Auto-restart
60 - 65Vdc

Over Output Voltage

SAFETY & EMC

Safety Standards
Withstand Voltage
Insulation Resistance
EMI Radiation & Conduction
Harmonics Current
EMC Immunity

EN60950
I/P - O/P 3KVac ; I/P - F/G 1.5KVac ; O/P - F/G 0.5KVac
I/P - O/P, I/P - F/G, O/P - F/G 100Mohm and 500Vdc
EN55022 Class B
EN61000-3-2, 3
EN61000-4-2, 3, 4, 5, 6, 8, 11, EN55024

ENVIRONMENT

Working Temperature
Derating above 50°C
Working Humidity
Storage Temperature Humidity

EN60950 : -10°C to +60°C (UL508 : 0 to 40°C)
See Derating Curve
20 - 90 RH non-condensing
-10°C to +80°C, 20 - 90 RH non-condensing

GENERAL

Switching Frequency @ Full Load
Case Material
Safety Class
Case Protection
Mounting
Connection

65 - 85KHz
Electro-Galvanized steel & Aluminum Enclosure and Poly-carbonate Front Panel
Degree of Protection 1 (IEC 5360)
IP 20 (IEC 529)
Snap on type with self locking can be installed on 35 mm Din-Rails / 7.5 or 15
Screw terminals with double terminals for output

REMARK

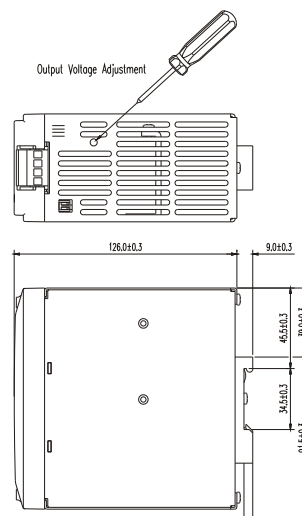
★Ta=25°C Cold start **100MHz Band width scope

120W Din-Rail Switching Mode Power Supply

DRS - 1210-12 / 1210-24 / 1210-48

Description

This range of compact DIN mounted switching mode power supplies are designed for a wide range of control equipments which demands good quality regulated DC power source with excellent EMC immunity and electrical performance in an industrial environment. Up to 5 units can be connected in parallel.



Specifications

INPUT

Voltage Range (Auto Select)
Frequency Range
Full Load AC Current
No Load AC Current
Inrush Current, cold start @25°C *
Leakage Current
Power Factor
Efficiency

DRS-1210-12

90 - 130Vac ; 180 - 260Vac
47 - 63Hz~
2.8A@100Vac ; 1.2A@230Vac
100mA@100Vac ; 140mA@230Vac
25A@100Vac ; 55A@230Vac
2mA
min. 70%
82%@100Vac ; 83%@230Vac

DRS-1210-24

2.6A@100Vac ; 1A@230Vac
90mA@100Vac ; 120mA@230Vac
85%@100Vac ; 86%@230Vac

DRS-1210-48

2.6A@100Vac ; 1A@230Vac
90mA@100Vac ; 120mA@230Vac
86%@100Vac ; 87%@230Vac

OUTPUT

Nominal DC Voltage
Voltage Adjust Range
Rated Current
Rated Power
Ripple & Noise (peak to peak)**
Line Regulation
Load Regulation (10% - 100%)
Hold-up Time (Full Load)
Parallel Operation

12V
10.5 - 14V
10A
120W
≤50mV
≤0.2%
≤0.3%
>30mSec@100Vac ; >40mSec@230Vac
5 units max. user selectable

24V
22.5 - 28V
5A

48V
44.5 - 53V
2.5A

PROTECTION

Over Load / Over Current
Over Output Voltage

10.8 - 11.4A, C.C., Auto-restart
16.5 - 18.5Vdc

5.4 - 5.7A, C.C., Auto-restart
30 - 35Vdc

2.7 - 2.9A, C.C., Auto-restart
63 - 68Vdc

SAFETY & EMC

Safety Standards
Withstand Voltage
Insulation Resistance
EMI Radiation & Conduction
Harmonics Current
EMC Immunity

EN60950
I/P - O/P 3KVac ; I/P - F/G 1.5KVac ; O/P - F/G 0.5KVac
I/P - O/P, I/P - F/G, O/P - F/G 100Mohm and 500Vdc
EN55022 Class B
EN61000-3-2, 3
EN61000-4-2, 3, 4, 5, 6, 8, 11, EN55024

ENVIRONMENT

Working Temperature
Derating above 50°C
Working Humidity
Storage Temperature Humidity

EN60950 : -10°C to +60°C (UL508 : 0 to 40°C)
See Derating Curve
20 - 90 RH non-condensing
-10°C to +80°C, 20 - 90 RH non-condensing

GENERAL

Switching Frequency @ Full Load
Case Material
Safety Class
Case Protection
Mounting
Connection

45 - 55KHz
Electro-Galvanized steel & Aluminum Enclosure and Poly-carbonate Front Panel
Degree of Protection 1 (IEC 5360)
IP 20 (IEC 529)
Snap on type with self locking can be installed on 35 mm Din-Rails / 7.5 or 15
Screw terminals with double terminals for output

REMARK

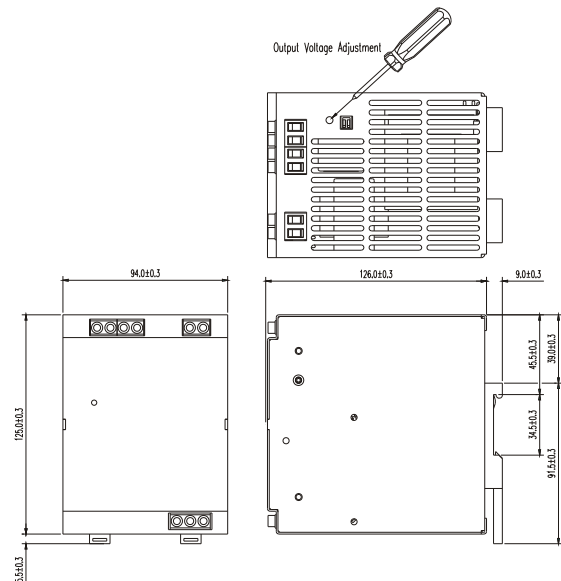
*Ta=25°C Cold start **100MHz Band width scope

All values are based on the Standard ambient Temperature 25°C and Pressure 0.1Mpa.

* SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE *

Description

This range of compact DIN mounted switching mode power supplies are designed for a wide range of control equipments which demands good quality regulated DC power source with excellent EMC immunity and electrical performance in an industrial environment. Up to 5 units can be connected in parallel.



Specifications

INPUT

Voltage Range (Auto Select)
Frequency Range
Full Load AC Current
No Load AC Current
Inrush Current, cold start @25°C *
Leakage Current
Power Factor
Efficiency

DRS-2410-12

90 - 130Vac ; 180 - 260Vac
47 - 63Hz~
4.0A@100Vac ; 1.9A@230Vac
80mA@100Vac ; 140mA@230Vac
32A@100Vac ; 58A@230Vac
2mA
min. 70%
84%@100Vac ; 85%@230Vac

DRS-2410-24

3.9A@100Vac ; 1.7A@230Vac
80mA@100Vac ; 140mA@230Vac
88%@100Vac ; 88%@230Vac

DRS-2410-48

3.9A@100Vac ; 1.7A@230Vac
80mA@100Vac ; 140mA@230Vac
88%@100Vac ; 88%@230Vac

OUTPUT

Nominal DC Voltage
Voltage Adjust Range
Rated Current
Rated Power
Ripple & Noise (peak to peak)**
Line Regulation
Load Regulation (10% - 100%)
Hold-up Time (Full Load)
Parallel Operation

12V
10 - 14V
20A
240W
≤50mV
≤0.2%
≤0.5%
>30mSec@100Vac ; >40mSec@230Vac
5 units max. user selectable

24V
22.5 - 28V
10A

48V
44 - 53V
5A

PROTECTION

Over Load / Over Current
Over Output Voltage

21 - 21.8A, C.C., Auto-restart
16.5 - 18.5Vdc

10.8 - 11.5A, C.C., Auto-restart
30 - 35Vdc

5.6 - 6.2A, C.C., Auto-restart
63 - 68Vdc

SAFETY & EMC

Safety Standards
Withstand Voltage
Insulation Resistance
EMI Radiation & Conduction
Harmonics Current
EMC Immunity

EN60950
I/P - O/P 3KVdc ; I/P - F/G 1.5KVdc ; O/P - F/G 0.5KVdc
I/P - O/P, I/P - F/G, O/P - F/G 100Mohm and 500Vdc
EN55022 Class B
EN61000-3-2, 3
EN61000-4-2, 3, 4, 5, 6, 8, 11, EN55024

ENVIRONMENT

Working Temperature
Derating above 50°C
Working Humidity
Storage Temperature Humidity

EN60950 : -10°C to +60°C (UL508 : 0 to 40°C)
See Derating Curve
20 - 90 RH non-condensing
-10°C to +80°C, 20 - 90 RH non-condensing

GENERAL

Switching Frequency @ Full Load
Case Material
Safety Class
Case Protection
Mounting
Connection

45 - 55KHz
Electro-Galvanized steel & Aluminum Enclosure and Poly-carbonate Front Panel
Degree of Protection 1 (IEC 5360)
IP 20 (IEC 529)
Snap on type with self locking can be installed on 35 mm Din-Rails / 7.5 or 15
Screw terminals with double terminals for output

REMARK

*Ta=25°C Cold start **100MHz Band width scope

All values are based on the Standard ambient Temperature 25°C and Pressure 0.1Mpa.

* SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE *

Single Output DC regulated power supply

EP - 601 / 611 (Linear mode)

Description

This series of low power , wide output voltage range DC regulated power supplies with adjustment controls for output voltage and current are suitable for college, general use , service field and hobbyist.

Features

- 0 - 30V adjustable output control
- 0 - 2.5A adjustable output control
- Precision ammeter and voltmeter
- Current limiting with LED indicator
- High stability
- One screw-on output plus two snap-on terminals
- Overload and short circuit protection
- Galvanized steel case



Specifications

Output Voltage
Rated Output Current
Ripple & Noise (r.m.s.)
Load Regulation
Line Regulation
Input Voltage
Meter Type
V Meter Range
A Meter Range
Meters' Accuracy
Cooling System
Protection Devices
Approvals
Dimensions (WxHxD)
Weight
Accessory

EP - 601

0 - 30VDC
2.5A
<5mV
<0.05% + 10mV
<0.05% + 10mV
230VAC / 50Hz~ (120VAC / 60Hz~ or on request)
Analog Meter
0 - 35V
0 - 3A
7% fsd
Natural Convection
Overload , Short Circuit
CE EN 60065 , EN 55014
150 x 145 x 200mm / 5.9 x 5.7 x 7.9in.
2.8Kgs / 6.2Lbs
User Manual

EP - 611

LCD Meter
3 digit display
3 digit display
1% + 2 counts

Description

The EP - 603/613 series are designed for general electronic servicing, school electronics, laboratory and hobbyist. All units may be used as either a constant voltage supply with current limiting or as constant current source with voltage limiting. Three independent outputs, two are fixed voltage, and one adjustable voltage.



Features

- One 0 - 30V adjustable output
- One 5V 500mA snap-on output
- One 12V 500mA snap-on output
- Current limiting with Indicator
- Adjustable current control
- Overload and short circuit protection
- Galvanized steel case
- Poly-carbonate front panel



Specifications

Output Voltage	EP - 603	EP - 613
Rated Output Current	0 - 30VDC	0 - 30VDC
Fixed Output Voltage 1	2.5A	2.5A
Fixed Output Voltage 2	5VDC 0.5A Continuous / 1A Maximum	5VDC 0.5A Continuous / 1A Maximum
Ripple & Noise (r.m.s.)	12VDC 0.5A Continuous / 1A Maximum	12VDC 0.5A Continuous / 1A Maximum
Load Regulation	<5mV	<5mV
Line Regulation	<0.05% + 10mV	<0.05% + 10mV
Input Voltage	<0.05% + 10mV	<0.05% + 10mV
Meter Type	230VAC / 50Hz~ (120VAC / 60Hz~ or on request)	230VAC / 50Hz~ (120VAC / 60Hz~ or on request)
V Meter Range	Analog Meter	LCD Meter
A Meter Range	0 - 30V	3 digit display
Meters' Accuracy	0 - 3A	3 digit display
Output Terminals	7% fsd	1% + 2 counts
Cooling System	One variable main output screw-on type ,	One variable main output screw-on type ,
Protection Devices	two snap on fixed voltage 1 and 2	two snap on fixed voltage 1 and 2
Approvals	Natural Convection	Natural Convection
Dimensions (WxHxD)	Overload , Short Circuit	Overload , Short Circuit
Weight	CE EN 60065 , EN 55014	CE EN 60065 , EN 55014
Accessory	150 x 145 x 200mm / 5.9 x 5.7 x 7.9in.	150 x 145 x 200mm / 5.9 x 5.7 x 7.9in.
	2.8Kgs / 6.2Lbs	2.8Kgs / 6.2Lbs
	User Manual	User Manual

Fixed Output DC regulated power supply

EP - 806 / 815 / 820 / 825 (Linear mode)

Description

This series of cost effective fixed output voltage DC 13.8V regulated power supplies provide clean and stable DC power source for transceiver and the Amateur Radio field. The two low current snap on terminals offer more flexibility.

Features

- Fixed 13.8V DC output
- High stability
- Low ripple and noise
- One screw-on output terminal
- Two snap on output (3A) terminals
- Overload warning LED indicator
- Overload and short circuit protection
- Galvanized steel case
- Poly-carbonate front panel



Specifications

	<i>EP - 806</i>	<i>EP - 815</i>	<i>EP - 820</i>	<i>EP - 825</i>
Output Voltage	13.8VDC			
Rated Output Current	6A	12A	18A	25A
Peak Output Current	7A	15A	20A	30A
Ripple & Noise (r.m.s.)	10mV			
Load Regulation	40mV	60mV	80mV	100mV
Line Regulation	15mV			
Input Voltage	230VAC / 50Hz~ (120VAC / 60Hz~ or on request)			
Cooling System	Natural Convection	Thermostatic Control Fan	Thermostatic Control Fan	Thermostatic Control Fan
Protection Devices	Overload , Short Circuit			
Approvals	CE EN 60065 , EN 55014			
Size (WxHxD)mm	150x145x200	150x145x300	150x145x300	150x145x300
(WxHxD)inch	5.9x5.7x7.9	5.9x5.7x11.8	5.9x5.7x11.8	5.9x5.7x11.8
Weight	4Kgs / 8.8Lbs	5.2Kgs / 11.4Lbs	6.5Kgs / 14.3Lbs	9Kgs / 19.8Lbs
Accessory	User Manual			

All values are based on the Standard ambient Temperature 25°C and Pressure 0.1Mpa.

* SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE *

EP - 907 / 912 / 920 / 925 (Linear mode)

Description

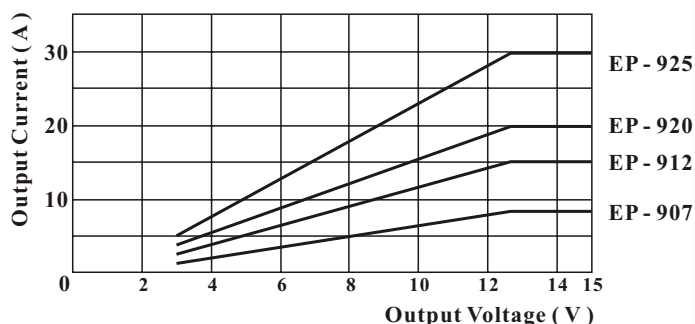
This series of low ripple and noise, adjustable voltage power supplies are designed for telecommunication field, workshop, production line and college. The special designed trifler wound transformer with thermal fuse and the extensive overload protection by dissipation limiting circuitry for the pass transistors make this series proven and well known for its reliability and stability.



Features

- 3 - 15V DC adjustable output
- Fixed voltage mode at 13.8V DC
- Overload and short circuit protection
- Overload warning LED indicator
- High stability
- Precision ammeter and voltmeter
- One screw on and 2 snap on terminals
- Galvanized steel case
- Fan cooling system for models over 200VA
- Output current limit is depended on output voltage

The current of the unit is depended on the output voltage as the following curve.



Specifications

	<i>EP - 907</i>	<i>EP - 912</i>	<i>EP - 920</i>	<i>EP - 925</i>
Variable Output Voltage	3 - 15VDC			
Fixed Output Voltage	13.8VDC			
Rated Output Current	6A	12A	18A	25A
Peak Output Current	7A	15A	20A	30A
Ripple & Noise (r.m.s.)	10mV			
Load Regulation	40mV	60mV	80mV	100mV
Line Regulation	15mV			
Input Voltage	230VAC / 50Hz~ (120VAC / 60Hz~ or on request)			
V Meter Range	0 - 20V			
A Meter Range	0 - 10A	0 - 15A	0 - 20A	0 - 30A
Meters' Accuracy	7% fsd			
Cooling System	Natural Convection	Thermostatic Control Fan	Thermostatic Control Fan	Thermostatic Control Fan
Protection Devices	Overload , Short Circuit			
Approvals	CE EN 60065 , EN 55014			
Size (WxHxD) mm	150x145x200	150x145x300	150x145x300	150x145x300
(WxHxD) inch	5.9x5.7x7.9	5.9x5.7x11.8	5.9x5.7x11.8	5.9x5.7x11.8
Weight	4.5Kgs / 9.9Lbs	5.5Kgs / 12Lbs	7Kgs / 15.4Lbs	9Kgs / 19.8Lbs
Accessory	User Manual			

Single Output DC regulated power supply

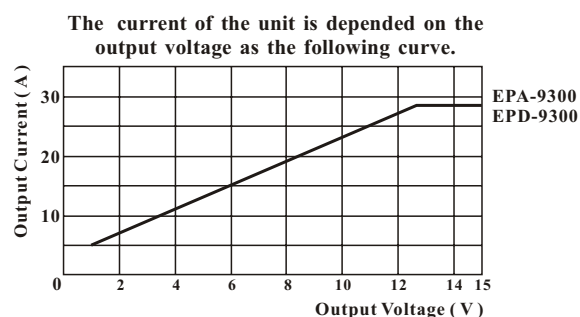
EPA - 9300 / EPD - 9300 (Linear mode)

Description

These high current power supplies are made for continuous operation and ideal to replace car batteries in situations such as : servicing or demonstrating high power car audio, ham radios, telecommunication equipment. The innovative design of the output terminals and the concealed voltage control knob are made for the above applications. The main high current output is at the back of unit, ideal for continuous operation. The voltage control knob is protected from in-adverdent tempering behind the two position flip cover at the front panel.

Features

- 1 - 15VDC adjustable output control
- 28A output current at >13.5VDC
- 13.8V DC output center lock
- High RFI stability
- Temperature control variable speed cooling fan
- Overload warning LED
- Overload and short circuit protection
- One 28A screw on terminal at back panel
- Two 3A snap on terminal on front panel for easy access
- Voltage control protected by flip cover



Specifications

EPA - 9300

EPD - 9300

Output Voltage	1 - 15VDC	
Rated Output Current	28A	
Peak Output Current	33A	
Ripple & Noise (r.m.s.)	5mV	
Load Regulation	50mV	
Line Regulation	5mV	
Input Voltage	230VAC / 50Hz~ (120VAC / 60Hz~ or on request)	
Meter Type	Analog Meter	LCD Meter
V Meter Range	0 - 20V	3 digit display
A Meter Range	0 - 35A	3 digit display
Meters' Accuracy	7% fsd	1% + 2 counts
Cooling System	Temperature control variable speed cooling fan	
Protection Devices	Overload , Short Circuit	
Approvals	CE EN 60065 , EN 55014	
Dimensions (WxHxD)	250 x 140 x 225mm / 9.8 x 5.5 x 8.9in.	
Weight	9.5Kgs / 21Lbs	
Accessory	User Manual	

LP - 502 / 503 / 504 / 512 / 513 / 514 (Linear mode)

Description

The LP - 500 series is a low power, DC regulated power supplies designed for 13.8V DC equipment, such as transceiver, automotive and marine electronic equipment. Advanced designs make this series achieve good performance, high stability, good reliability and cost effective.

Features

- Fixed 13.8V DC output
- High stability
- Low ripple and noise
- Compact size
- Overload and short circuit protection
- Galvanized steel case
- Poly-carbonate front panel



Specifications

	<i>LP-502</i>	<i>LP-512</i>	<i>LP-503</i>	<i>LP-513</i>	<i>LP-504</i>	<i>LP-514</i>
Output Voltage	13.8VDC					
Rated Output Current	2A	2A	3A	3A	4A	4A
Peak Output Current	4A	4A	5A	5A	6A	6A
Ripple & Noise (r.m.s.)	4mV	4mV	5mV	5mV	6mV	6mV
Load Regulation	120mV	120mV	125mV	125mV	130mV	130mV
Line Regulation	250mV	250mV	280mV	280mV	320mV	320mV
Input Voltage	230VAC / 50Hz~ (120VAC / 60Hz~ or on request)					
Cigarette Socket	NO	YES	NO	YES	NO	YES
Cooling System	Natural Convection					
Protection Devices	Overload , Short Circuit					
Approvals	CE EN 60065 , EN 55014					
Dimensions (WxHxD)	160x92x150mm 6.3x3.6x5.9inch		160x92x165mm 6.3x3.6x6.5inch		160x92x165mm 6.3x3.6x6.5inch	
Weight	2.4Kgs / 5.3Lbs		2.7Kgs / 6Lbs		3Kgs / 6.6Lbs	

All values are based on the Standard ambient Temperature 25°C and Pressure 0.1Mpa.

* SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE *

Master Slave Laboratory Grade DC regulated power supply

MPA - 1850/3030/6015 , MPD - 1850/3030/6015 (Linear mode)

Description

This series LABORATORY GRADE DC POWER SUPPLIES are built with precision coarse and fine output voltage and current limiting controls. The OVP (output over voltage protection) protects voltage sensitive load by instant shutting down the supply when output voltage is in excessive to the set voltage due to line surge or otherwise. Current limiting control with automatic cross over of constant voltage (CV) and constant current (CC) mode makes this series ideal for R&D work in laboratory situations.

Features

- Master / Slave connection with tracking operation
- Auto-cross over CV and CC
- LED indicators for CV and CC
- Low ripple and noise
- Excellent load and line regulation
- Coarse and fine voltage / current controls
- Precision ammeter and voltmeter
- Floating ground output



Specifications

	MPA-1850	MPD-1850	MPA-3030	MPD-3030	MPA-6015	MPD-6015
Output Voltage	0 - 18VDC	0 - 18VDC	0 - 30VDC	0 - 30VDC	0 - 60VDC	0 - 60VDC
Output Voltage Control	Fine and Coarse adjust					
Rated Output Current	0 - 5A	0 - 5A	0 - 3A	0 - 3A	0 - 1.5A	0 - 1.5A
Output Current Control	Fine and Coarse adjust					
Ripple & Noise (r.m.s.)	1mV					
Load Regulation	0.02% + 3mV					
Line Regulation	0.02% + 3mV					
Input Voltage	230VAC / 50Hz~ (120VAC / 60Hz~ or on request)					
Meter Type	Analog	LED	Analog	LED	Analog	LED
V Meter Range	0 - 20V	3digit	0 - 35V	3digit	0 - 70V	3digit
A Meter Range	0 - 5A	display	0 - 3A	display	1.5A	display
Meters' Accuracy	7% fsd	1% + 2count	7% fsd	1% + 2count	7% fsd	1% + 2count
Cooling System	Natural Convection					
LED Indicators	C.C. and C.V.					
Approvals	CE IEC 1010 , EN 55011					
Dimensions (WxHxD)	205x115x270mm (8x4.5x10.8in.)					
Weight	5Kgs / 11Lbs					
Remark	Master / Slave connections with tracking CV and CC mode auto cross over					

All values are based on the Standard ambient Temperature 25°C and Pressure 0.1Mpa.

* SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE *

NP - 9603 / 9613 / 9605 / 9615 (Linear mode)

Description

The NP - 9600 series are designed for general electronic servicing, school electronics, laboratory and hobbyist. All units may be used as either a constant voltage supply with current limiting. Three independent outputs, two are fixed voltage, and one adjustable voltage.

Features

- One 0 - 30V adjustable output
- One 5V 500mA snap-on output
- One 12V 500mA snap-on output
- Current limiting with Indicator
- Adjustable current control
- Overload and short circuit protection
- Galvanized steel case
- Poly-carbonate front panel
- Housing are available in (Pantone warm grey 1C or Pantone 433C dark grey)



Specifications

	NP - 9603	NP - 9613	NP - 9605	NP - 9615
Output Voltage	0 - 30VDC			
Rated Output Current	3A	3A	5A	5A
Fixed Output Voltage 1	5VDC 0.5A Continuous / 1A Maximum			
Fixed Output Voltage 2	12VDC 0.5A Continuous / 1A Maximum			
Ripple & Noise (r.m.s.)	5mV			
Load Regulation	20mV	20mV	30mV	30mV
Line Regulation	10mV			
Input Voltage	230VAC / 50Hz~ (120VAC / 60Hz~ or on request)			
Meter Type	Analog	LCD	Analog	LCD
V Meter Range	0 - 30V	3 digit display	0 - 30V	3 digit display
A Meter Range	0 - 3A	3 digit display	0 - 5A	3 digit display
Meters' Accuracy	7% fsd	1% +2 count	7% fsd	1% +2 count
Output Terminals	One variable main output screw-on type , two snap on fixed voltage 1 and 2			
Cooling System	Natural Convection	Natural Convection	Thermostatic Control Fan	Thermostatic Control Fan
Protection Devices	Overload , Short Circuit			
Approvals	CE EN 61558 , EN 55014			
Dimensions (WxHxD)	205x115x230mm 8x4.5x9in.	205x115x230mm 8x4.5x9in.	205x115x280mm 8x4.5x11in.	205x115x280mm 8x4.5x11in.
Weight	5Kgs/11Lbs	5Kgs/11Lbs	6.5Kgs/14.3Lbs	6.5Kgs/14.3Lbs

All values are based on the Standard ambient Temperature 25°C and Pressure 0.1Mpa.

* SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE *

Triple Output DC regulated power supply

NP - 9625 (Linear mode)

Description

NP - 9625 are designed for general electronic servicing, school electronics, laboratory and hobbyist. All units may be used as either a constant voltage supply with current limiting. Three independent outputs, two are fixed voltage, and one adjustable voltage.

Features

- One 0 - 30V adjustable output
- One 5V 500mA snap-on output
- One 12V 500mA snap-on output
- Current limiting with Indicator
- Adjustable current control
- Overload and short circuit protection
- Galvanized steel case
- Poly-carbonate front panel
- Housing are available in (Pantone warm grey 1C or Pantone 433C dark grey)



Specifications

Output Voltage	NP - 9625 0 - 30VDC
Rated Output Current	10A
Fixed Output Voltage 1	5VDC 0.5A Continuous / 1A Maximum
Fixed Output Voltage 2	12VDC 0.5A Continuous / 1A Maximum
Ripple & Noise (r.m.s.)	5mV
Load Regulation	≤50mV
Line Regulation	≤10mV
Input Voltage	230VAC / 50Hz~ (120VAC / 60Hz~ or on request)
Meter Type	LCD Meter
V Meter Range	3 digit display
A Meter Range	3 digit display
Meters' Accuracy	Volt meter : +/-1% +1 count , Ammeter : =/-1% +3 count
Output Terminals	One variable main output screw-on type , two snap on fixed voltage 1 and 2
Cooling System	Thermostatic Control Fan
Protection Devices	Overload , Short Circuit
Approvals	CE EN 61010 , EN 55011
Dimensions (WxHxD)	205 x 125 x 280mm / 8 x 4.5 x 11in.
Weight	6.5Kgs / 14.3Lbs

NP - 9812 / 9818 / 9825 (Linear mode)

Description

This series of cost effective fixed output voltage DC 13.8V regulated power supplies provide clean and stable DC power source for transceiver and the Amateur Radio field. The two low current snap on terminals offer more flexibility.

Features

- Fixed 13.8V DC output
- High stability
- Low ripple and noise
- One screw-on output terminal
- Thermostatic Variable speed cooling fan
- Two snap on output (3A) terminals
- Overload warning LED indicator
- Overload and short circuit protection
- Galvanized steel case
- Poly-carbonate front panel
- Housing are available in (Pantone warm grey 1C or Pantone 433C dark grey)



Specifications

	<i>NP - 9812</i>	<i>NP - 9818</i>	<i>NP - 9825</i>
Output Voltage	13.8VDC		
Rated Output Current	12A	18A	25A
Peak Output Current	15A	20A	30A
Ripple & Noise (r.m.s.)	5mV		
Load Regulation	30mV	40mV	50mV
Line Regulation	5mV		
Input Voltage	230VAC / 50Hz~ (120VAC / 60Hz~ or on request)		
Cooling System	Variable speed thermally control fan		
Protection Devices	Overload , Short Circuit		
Approvals	CE EN 61558 , EN 55014		
Dimensions (WxHxD)	205x115x280mm / 8x4.5x11in.		
Weight	5.2Kgs/11.4Lbs	6.5Kgs/14.3Lbs	9Kgs/20Lbs

All values are based on the Standard ambient Temperature 25°C and Pressure 0.1Mpa.

* SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE *

Single Output DC regulated power supply

NP - 9912 / 9918 / 9925 (Linear mode)

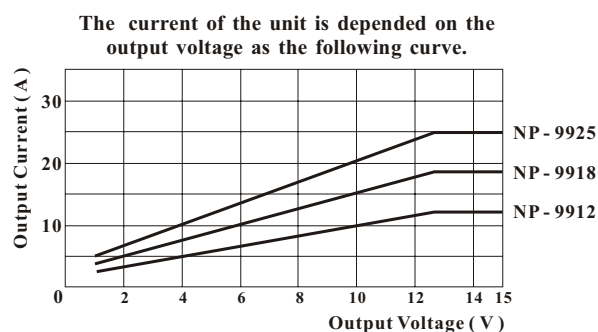
Description

The NP - 9900 series is a cost effective and general purpose DC regulated supply with adjustable output voltage and overload warning light. The low ripple and noise feature make it especially suitable for use with telecommunication equipment.



Features

- 1 - 15V DC adjustable output
- Fixed voltage mode at 13.8VDC
- Temperature control variable speed cooling fan
- Overload warning LED indicator
- Overload and short circuit protection
- Output current limit is depended on output voltage
- Galvanized steel case
- Poly-carbonate front panel
- Housing available in Pantone warm grey 1C or Pantone 433C dark grey



Specifications

	NP - 9912	NP - 9918	NP - 9925
Output Voltage	1 - 15VDC		
Fixed Output Voltage	13.8VDC		
Rated Output Current	12A	18A	25A
Peak Output Current	15A	20A	30A
Ripple & Noise (r.m.s.)	10mV		
Load Regulation	30mV	40mV	50mV
Line Regulation	10mV		
Input Voltage	230VAC / 50Hz~ (120VAC / 60Hz~ or on request)		
V Meter Range	0 - 20V		
A Meter Range	0 - 15A	0 - 20A	0 - 30A
Meters' Accuracy	7% fsd		
Cooling System	Variable Speed Thermally Control Fan		
Protection Devices	Overload , Short Circuit		
Approvals	CE EN 61558 , EN 55014		
Dimensions (WxHxD)	205 x 115 x 275mm / 8 x 4.5 x 10.8in.		
Weight	5.5Kgs / 12Lbs	7Kgs / 15.4Lbs	9Kgs / 20Lbs
Accessory	User Manual		

All values are based on the Standard ambient Temperature 25°C and Pressure 0.1Mpa.

* SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE *

NDP - 4185 / 4303 / 4601 (Linear mode)

Description

This series merge the low ripple, high precision output of laboratory graded Linear Regulated Power Supplies with Full Remote Programming and Data Logging functionality.

The popular USB and versatile RS-485 interface are built in with the unit for full remote programming and data logging with personal computer.

One PC can control and data log up to 31 power supplies of different models of this series via RS-232/RS-485 Adapter.

With our software, the power supply can operate up to 9 different sets of voltage and limit current; and 20 sequential timed-steps. The remote program also can store up to 100 sequential timed-steps of different sets of voltage, current and the running time up to 999 repetitive cycles and controls power supply. All the collected data from each power supplies during operation can be stored in MS Excel™ (.xls) format.

Command Set and LabView™ driver are given, so that users can integrate with their own software with the power supply for full remote programming functions.

In addition to the tracking OVP (Over Voltage Protection), there is an user preset upper output voltage limit, which prevents voltage adjustment over the preset limit.

This feature is vital in preventing damage to delicate, voltage sensitive test piece & PCB.

Typical Applications

R&D works, Quality Control, Production especially in applications which require groups of different settings of output voltage, current limit levels for various cyclic operation period and records of output reading with dynamic loading during tests. It is ideals for applications with multiple power supplies at various locations with one centralized PC control.

Specifications

	<i>NDP - 4185</i>	<i>NDP - 4303</i>	<i>NDP - 4601</i>
Output Voltage	0 - 18VDC	0 - 30VDC	0 - 60VDC
Output Current	0 - 5A	0 - 3A	0 - 1.5A
Output Rated Power	90W		
Ripple & Noise (r.m.s.)	3mVrms		
Load Regulation (Voltage)	5mV	4mV	5mV
Line Regulation (Voltage)	3mV		
Load Regulation (Current)	5mA	4mA	4mA
Line Regulation (Current)	2mA		
Input Voltage	230VAC / 50Hz~ (120VAC / 60Hz~ or on request)		
Power Consumption	Approx. 220V A/W		
Display Meter	4 digits - Display LED Ammeter and Voltmeter		
Meter's Accuracy	±0.1% +2 counts		
Indicators	Constant Current & Constant Voltage LED Indicators		
Cooling System	Natural Convection		
Operating Temperature	5 - 40°C		
Protections	Tracking OVP (Over Voltage Protection), Current Limiting and Over Temperature Protection		
Approvals	CE-EMC : EN55011 , CE-LVD : EN 61010		
Dimensions (WxHxD)	205 x 115 x 275mm / 8 x 4.5 x 10.8in.		
Weight	Approx. 5Kgs / 11Lbs		
Accessories	User Manual, Application Software for windows, LabView™ Driver, Command Set, USB1.1 Driver, USB Cable, RS-485 Connector and One 120Ohm Resistor		
Optional Accessory	RS-232 to RS-485 Adaptor (ATR-2485)		
Remarks	Adjustable Upper Voltage Limit, Power Factor Correction		
<i>Remote Programming Specifications</i>			
Communication Interface	(USB1.1 Single Power Supply) and (RS-485 up to 31 Power Supplies)		
Remote Programming Functionality	Full Control of Power Supply Functions and Data Read-back		
Data Logging	Yes, with supplied software		
Baud Rate	9600bps		

Features

- Linear mode for high precision, low noise output,
- Excellent Load and Line regulation,
- Full remote programming and data logging,
- Built-in USB and RS232/485 interface which can control up to 31 units,
- Supplied with software, command sets and LabView™ driver,
- Local or remote programmable cyclic run up to 20 sets of V, I , operational periods,
- 9 preset voltage and current at keypad and software,
- 20 sequential timed steps can be stored in power supply or computer,
- 100 sequential timed steps can be stored in computer,
- CC & CV indicators with auto-cross over,
- 4 digits LED high resolution ammeter and voltmeter,
- Tracking OVP and user preset maximum output voltage.



100W Switching Mode power supply

NRP - 2050 (20V5A) / 3630 (36V3A) / 6016 (60V1.6A)

Description

This series of 100W Switching Mode Power Supplies with Current Limiting Control, is designed with the objectives of cost effectiveness, compactness and easy portability.

The slim tower housing makes it ideal for tight work bench. It is light and conveniently portable with a collapsible handle.

The large and illuminated LCD display provides clear and sharp readings even under dim light. The output power on off switch allows safe and handy operations. The Tracking OVP (Output Over Voltage Protection) ensures a better and tighter protection to voltage sensitive loads. It has good line and load regulations, high efficiency and low ripple & noise that are typical of advanced switching mode power supply.

It meets the CE safety standards of EN-61010 for laboratory grade power supply and respective EMC standards.

Features

- Automatic Cross over CV and CC mode
- Illuminated LCD indications of A, V, Output On-OFF, CC & CV.
- 3 digit displays of Volt and Amp meters
- Voltage and Current controls
- Compact slim tower housing
- Collapsible handle
- Output power on off switch at front panel
- Natural Convection
- Tracking OVP (output over voltage protection), Short circuit, overload and over temperature protections.
- Good line, load regulations and low ripple and noise
- CE approvals



Specifications

	NRP - 2050	NRP-3630	NRP-6016
Input Voltage (Jumper Selection)	90 - 130 / 180 - 240Vac , 50Hz~		
Full Load Input Current at 230Vac	0.83A		
Output Voltage Adjustable Range	1.0 - 20Vdc	1.0 - 36Vdc	1.0 - 60Vdc
Output Current Adjustable Range	0 - 5A	0 - 3A	0 - 1.6A
Voltage Regulation			
Load from 10% to 100% Variation	70mV	50mV	50mV
Line from 180 to 264Vac Variation	20mV		
Ripple & Noise in r.m.s.	5mV		
Ripple & Noise (peak to peak)	30mV	30mV	50mV
Current Regulation			
Load from 10% to 100% Variation	20mA		
Line from 180 to 264Vac Variation	20mA		
Ripple & Noise (peak to peak)	20mA		
Switching Operation Frequency	80KHz to 120KHz		
Power Factor	0.68		
Efficiency at Maximum Power	84%	85%	85%
Voltmeter and Ammeter Display	3 Digit		
Voltmeter Accuracy	±1% +5counts for range V≤5V ±1% +3counts for range V>5V	±1% +5counts for range V≤10V ±1% +3counts for range V>10V	±1% +5counts for range V≤20V ±1% +3counts for range V>20V
Ammeter Accuracy	±1% +5counts for range I≤2A ±1% +3counts for range I>2A	±1% +5counts for range I≤1A ±1% +3counts for range I>1A	±1% +5counts for range I≤0.5A ±1% +3counts for range I>0.5A
LCD Indication	CC, CV, Amp, Volt, Output ON-OFF		
Protection	Short Circuit, Overload, Over Temperature, Tracking OVP		
CE Approvals	LVD : EN 61010 , EMC : EN 55011		
Cooling System	Natural Convection		
Dimensions in mm (WxHxD)	70 x 150 x 250mm / 2.8 x 6.0 x 9.8in.		
Weight in Kg	2Kgs / 4.4Lbs		

All values are based on the Standard ambient Temperature 25°C and Pressure 0.1Mpa.

* SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE *

NSP - 2050 (20V5A) / 3630 (36V3A) / 6016 (60V1.6A)

Description

This series of 100W Switching Mode Power Supplies with Current Limiting Control, is designed with the objectives of high accuracy, compactness and easy portability.

Wire wound potentiometers are used for voltage and current control.

4 digit display LCD of voltage and current for high precision. The slim tower housing makes it ideal for tight work bench. It is light and conveniently portable with a collapsible handle.

The large and illuminated LCD display provides clear and sharp readings even under dim light. The output power on off switch allows safe and handy operations. The Tracking OVP (Output Over Voltage Protection) ensures a better and tighter protection to voltage sensitive loads. It has good line and load regulations, high efficiency and low ripple & noise that are typical of advanced switching mode power supply.

It meets the CE safety standards of EN-61010 for laboratory grade power supply and respective EMC standards.

Features

- Automatic Cross over CV and CC mode
- Illuminated LCD indications of A, V, Output On-OFF, CC & CV.
- 4 digit displays of Volt and Amp meters
- Wire wound potentiometers for Voltage and Current controls
- Voltage and Current controls
- Compact slim tower housing
- Collapsible handle
- Output power on off switch at front panel
- Natural Convection
- Tracking OVP (output over voltage protection), Short circuit, overload and over temperature protections.
- Good line, load regulations and low ripple and noise
- CE approvals



Specifications

	<i>NSP - 2050</i>	<i>NSP-3630</i>	<i>NSP-6016</i>
Input Voltage (Jumper Selection)	90 - 130 / 180 - 260Vac , 50Hz~		
Full Load Input Current at 230Vac	0.83A		
Output Voltage Adjustable Range	1.0 - 20Vdc	1.0 - 36Vdc	1.0 - 60Vdc
Output Current Adjustable Range	0 - 5A	0 - 3A	0 - 1.6A
Voltage Regulation			
Load from 10% to 100% Variation	70mV	50mV	50mV
Line from 180 to 264Vac Variation	20mV		
Ripple & Noise in r.m.s.	5mV		
Ripple & Noise (peak to peak)	30mV	30mV	50mV
Current Regulation			
Load from 10% to 100% Variation	20mA		
Line from 180 to 264Vac Variation	20mA		
Ripple & Noise (peak to peak)	20mA		
Switching Operation Frequency	80KHz to 120KHz		
Power Factor	0.68		
Efficiency at Maximum Power	84%	85%	85%
Volt and Amp Potentiometer Type	Wire Wound		
Voltmeter and Ammeter Display	4 Digit		
Voltmeter Accuracy	±0.5% +5counts for range V≤5V ±0.5% +3counts for range V>5V	±0.5% +5counts for range V≤10V ±0.5% +3counts for range V>10V	±0.5% +5counts for range V≤20V ±0.5% +3counts for range V>20V
Ammeter Accuracy	±0.5% +5counts for range I≤2A ±0.5% +3counts for range I>2A	±0.5% +5counts for range I≤1A ±0.5% +3counts for range I>1A	±0.5% +5counts for range I≤0.5A ±0.5% +3counts for range I>0.5A
LCD Indication	CC, CV, Amp, Volt, Output ON-OFF		
Protection	Short Circuit, Overload, Over Temperature, Tracking OVP		
CE Approvals	LVD : EN 61010 , EMC : EN 55011		
Cooling System	Natural Convection		
Dimensions in mm (WxHxD)	70 x 150 x 250mm / 2.8 x 6.0 x 9.8in.		
Weight in Kg	2Kgs / 4.4Lbs		

All values are based on the Standard ambient Temperature 25°C and Pressure 0.1Mpa.

* SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE *

High Power Industrial Grade Linear Regulated Power Supply With Remote Sensing / Remote Control and adjustable tracking OVP

PSD - 1550 (Linear mode)

Description

This industrial grade linear mode circuitry design ensures consistent low ripple and noise for this series of 750W power supplies. Coarse and fine voltage control for quick and precise voltage adjustment, automatic cross over CC mode with current control.

The unique wide range adjustable tracking OVP is made especially for various voltage sensitive loads that the usual factory preset OVP cannot cover. This special feature also makes simulation of battery in the test of UPS or charger workable without prematurely shut down due to factory preset OVP.

Full remote control terminals (voltage, current, and output on/off) and Remote sensing make these power supplies suitable for any location from the loads.

With optional accessories the unit can be converted easily to rack mountable unit.

Features

- Low ripple and noise
- Adjustable tracking OVP
- Full Remote control functionality
- Remote sensing for precise applied loading voltage
- Automatic cross over CC, CV mode
- 4 digit LED display meters
- Rack mountable



Specifications

Output Voltage	PSD - 1550 0 - 15Vdc
Output Voltage Control	Coarse and Fine Potentiometer
Output Current	0 - 50A
Output Current Control	One Potentiometer
Output Rated Power	750W
Ripple & Noise (r.m.s.)	4mV
Load Regulation (voltage)	0.02% +15mV
Line Regulation (voltage)	0.02% +5mV
Load Regulation (current)	0.15% +10mA
Line Regulation (current)	0.1% +10mA
Input Voltage	230Vac, 50Hz~ (or on request)
Display Meter	4 digits - Display LED Ammeter and Voltmeter
Meters' Accuracy	±0.5% +3 counts
Indicators	Constant Current and Constant Voltage LED Indicators
Cooling System	Constant Speed Fan
Operating Temperature	0 - 40°C
Special Feature	Remote Output ON / OFF, Voltage and Current Control, Remote Sensing
Protections	Tracking OVP (Over Voltage Protection) (10% - 100% Adjustable for PSD-1550) Over Temperature, Short Circuit
Approvals	CE EMC : EN 55011, LVD : EN 61010
Dimensions (WxHxD)	357 x 186 x 441 mm / 14 x 7.3 x 17.4in.
Weight	Approx. 28kgs / 62lbs

All values are based on the Standard ambient Temperature 25°C and Pressure 0.1Mpa.

* SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE *

High Power Industrial Grade Linear Regulated Power Supply With Remote Sensing / Remote Control and adjustable tracking OVP

PSD - 3030 / 5020 (Linear mode)

Description

This industrial grade linear mode circuitry design ensures consistent low ripple and noise for this series of 900W power supplies. Coarse and fine voltage control for quick and precise voltage adjustment, automatic cross over CC mode with current control.

The unique wide range adjustable tracking OVP is made especially for various voltage sensitive loads that the usual factory preset OVP cannot cover. This special feature also makes simulation of battery in the test of UPS or charger workable without prematurely shut down due to factory preset OVP.

Full remote control terminals (voltage, current, and output on/off) and Remote sensing make these power supplies suitable for any location from the loads.

With optional accessories the unit can be converted easily to rack mountable unit.

Features

- Low ripple and noise
- Adjustable tracking OVP (10-100% PSD-3030, 10-80% PSD-5020)
- Full Remote control functionality
- Remote sensing for precise applied loading voltage
- Automatic cross over CC, CV mode
- 4 digit LED display meters
- Rack mountable



Specifications

	PSD-3030	PSD-5020
Output Voltage	0 - 30Vdc	0 - 50Vdc
Output Voltage Control	Coarse and Fine Potentiometer	
Output Current	0 - 30A	0 - 18A
Output Current Control	One Potentiometer	
Output Rated Power	900W	
Ripple & Noise (r.m.s.)	4mV	6mV
Load Regulation (voltage)	0.02% + 5mV	
Line Regulation (voltage)	0.02% + 5mV	
Load Regulation (current)	0.2% + 10mA	0.1% + 10mA
Line Regulation (current)	0.1% + 10mA	
Input Voltage	230Vac, 50Hz~ (or on request)	
Display Meter	4 digits - Display LED Ammeter and Voltmeter	
Meters' Accuracy	±0.5% + 3 counts	
Indicators	Constant Current and Constant Voltage LED Indicators	
Cooling System	Constant Speed Fan	
Operating Temperature	0 - 40°C	
Special Feature	Remote Output ON / OFF, Voltage and Current Control, Remote Sensing	
Protections	Tracking OVP (Over Voltage Protection) (10% - 100% Adjustable for PSD-3030) (10% - 80% Adjustable for PSD-5020) Over Temperature, Short Circuit	
Approvals	CE EMC : EN 55011, LVD : EN 61010	
Dimensions (WxHxD)	357 x 186 x 441 mm / 14 x 7.3 x 17.4in.	
Weight	Approx. 28kgs / 62lbs	

All values are based on the Standard ambient Temperature 25°C and Pressure 0.1Mpa.

* SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE *

High Power Industrial Grade Linear Regulated Power Supply With full Remote Programming & Remote Sensing.

PSM - 1550 (Linear mode)

Description

This series merge the low ripple, high precision output of industrial graded Linear Regulated Power Supplies with Full Remote Programming, Data Logging & Remote Sensing functionality.

The popular RS-232 and versatile RS-485 interface are built in with the unit for full remote programming and data logging with personal computer.

One PC can control and data log up to 31 power supplies of different models of this series via RS-232/RS-485 Adapter.

The power supply can operate up to 9 different sets of voltage and limit current; and 20 sequential timed-steps at the front panel.

With our software, 100 sequential timed-steps of different sets of voltage, current and running time, up to 999 repetitive cycles can be programmed using any computer.

All the collected data from each power supplies during operation can be stored in MS Excel™ (.xls) format.

Command Set and LabView® driver are given, so that users can integrate with their own software with the power supply for full remote programming.

In addition to the tracking OVP (Over Voltage Protection), there is an user preset upper output voltage limit, which prevents voltage adjustment above the preset limit.

This feature is vital in preventing damage to delicate, voltage sensitive test piece.

The REMOTE CONTROL feature allows for full control including output on/off of the power supply without computer in a stand alone situation.

Features

- Linear mode for high precision, low noise output,
- Excellent Load and Line regulation,
- Full remote programming and data logging,
- Built-in RS232/485 interface which can control up to 31 units,
- Supplied with software, command sets and LabView™ driver,
- Local or remote programmable cyclic run up to 20 sets of V, I , operational periods,
- 9 preset voltage and current at keypad and software,
- 20 sequential timed steps can be stored in power supply and computer,
- 100 sequential timed steps can be stored in computer.
- Remote Sensing and separate Remote Control terminals.
- CC & CV indicators with auto-cross over,
- 4 digits LED high resolution ammeter and voltmeter,
- Tracking OVP and user preset maximum output voltage.

Typical Applications

R&D works, Quality Control, Production especially in applications which require groups of different settings of output voltage, current limit levels for various cyclic operation period and records of output reading with dynamic loading during tests. It is ideals for applications with multiple power supplies at various locations with one centralized PC control.



Specifications

Output Voltage
Output Current
Output Rated Power
Ripple & Noise (r.m.s.)
Load Regulation (voltage)
Line Regulation (voltage)
Load Regulation (current)
Line Regulation (current)
Input Voltage
Display Meter
Voltmeter Accuracy
Ammeter Accuracy
Indicators
Cooling System
Operating Temperature
Protections
Approvals
Dimensions (WxHxD)
Weight
Accessories
Driver,

Optional Accessory

Remark

Remote Programming Specifications

Communication Interface

Remote Programming Functionality

Data logging

Baud Rate

PSM-1550

0 - 15Vdc

0 - 50A

750W

4mV

0.02% +15mV

0.02% +5mV

0.15% +10mA

0.1% +10mA

230Vac , 50Hz~ (or on request)

4 digits - Display LED Ammeter and Voltmeter

0.5% + 2 counts

0.5% + 4 counts

Constant Current and Constant Voltage LED Indicators

Fan Cooling

0 - 40°C

Tracking OVP (Over Voltage Protection), Current Limiting

CE EMC : EN 55011 , LVD : EN 61010

357 x 186 x 441mm / 14 x 7.3 x 17.4in.

Approx. 28kgs / 62lbs

User Manual, Application Software for Windows®, Labview®

Command Set, RS-232 Cable, RS-485 Connector and one

120ohm Resistor

RS-232 to RS-485 Adapter (ATR-2485)

Adjustable Upper Voltage Limit

RS-232 and RS-485 (up to 31 Power Supplies)

Full control of power supply functions and data read-back

Yes, with supplied software

9600bps

All values are based on the Standard ambient Temperature 25°C and Pressure 0.1Mpa.

* SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE *

High Power Industrial Grade Linear Regulated Power Supply With full Remote Programming & Remote Sensing.

PSM - 3030 / 5020 (Linear mode)

Description

This series merge the low ripple, high precision output of industrial graded Linear Regulated Power Supplies with Full Remote Programming, Data Logging & Remote Sensing functionality.

The popular RS-232 and versatile RS-485 interface are built in with the unit for full remote programming and data logging with personal computer.

One PC can control and data log up to 31 power supplies of different models of this series via RS-232/RS-485 Adapter.

The power supply can operate up to 9 different sets of voltage and limit current; and 20 sequential timed-steps at the front panel.

With our software, 100 sequential timed-steps of different sets of voltage, current and running time, up to 999 repetitive cycles can be programmed using any computer.

All the collected data from each power supplies during operation can be stored in MS Excel™ (.xls) format.

Command Set and LabView® driver are given, so that users can integrate with their own software with the power supply for full remote programming.

In addition to the tracking OVP (Over Voltage Protection), there is an user preset upper output voltage limit, which prevents voltage adjustment above the preset limit.

This feature is vital in preventing damage to delicate, voltage sensitive test piece.

The REMOTE CONTROL feature allows for full control including output on/off of the power supply without computer in a stand alone situation.

Features

- Linear mode for high precision, low noise output,
- Excellent Load and Line regulation,
- Full remote programming and data logging,
- Built-in RS232/485 interface which can control up to 31 units,
- Supplied with software, command sets and LabView™ driver,
- Local or remote programmable cyclic run up to 20 sets of V, I , operational periods,
- 9 preset voltage and current at keypad and software,
- 20 sequential timed steps can be stored in power supply and computer,
- 100 sequential timed steps can be stored in computer.
- Remote Sensing and separate Remote Control terminals.
- CC & CV indicators with auto-cross over,
- 4 digits LED high resolution ammeter and voltmeter,
- Tracking OVP and user preset maximum output voltage.

Typical Applications

R&D works, Quality Control, Production especially in applications which require groups of different settings of output voltage, current limit levels for various cyclic operation period and records of output reading with dynamic loading during tests. It is ideals for applications with multiple power supplies at various locations with one centralized PC control.



Specifications

	PSM-3030	PSM-5020
Output Voltage	0 - 30Vdc	0 - 50Vdc
Output Current	0 - 30A	0 - 18A
Output Rated Power	900W	
Ripple & Noise (r.m.s.)	4mV	6mV
Load Regulation (voltage)	0.02% + 5mV	
Line Regulation (voltage)	0.02% + 5mV	
Load Regulation (current)	0.1% + 10mA	0.2% + 10mA
Line Regulation (current)	0.1% + 10mA	
Input Voltage	230Vac , 50Hz~ (or on request)	
Display Meter	4 digits - Display LED Ammeter and Voltmeter	
Voltmeter Accuracy	0.5% + 2 counts	0.5% + 3 counts
Ammeter Accuracy	0.5% + 2 counts	0.5% + 2 counts
Indicators	Constant Current and Constant Voltage LED Indicators	
Cooling System	Fan Cooling	
Operating Temperature	0 - 40°C	
Protections	Tracking OVP (Over Voltage Protection), Current Limiting	
Approvals	CE EMC : EN 55011 , LVD : EN 61010	
Dimensions (WxHxD)	357 x 186 x 441 mm / 14 x 7.3 x 17.4in.	
Weight	Approx. 28kgs / 62lbs	
Accessories	User Manual, Application Software for Windows®, Labview® Driver, Command Set, RS-232 Cable, RS-485 Connector and one 120ohm Resistor	
Optional Accessory	RS-232 to RS-485 Adapter (ATR-2485)	
Remark	Adjustable Upper Voltage Limit	
Remote Programming Specifications		
Communication Interface	RS-232 and RS-485 (up to 31 Power Supplies)	
Remote Programming Functionality	Full control of power supply functions and data read-back	
Data logging	Yes, with supplied software	
Baud Rate	9600bps	

All values are based on the Standard ambient Temperature 25°C and Pressure 0.1Mpa.

* SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE *

Remote Programming Switching Mode DC Regulated Power Supply

SDP - 2210 / 2405 / 2603

Description

This is a series of cost effective Switching Mode programmable power supplies with full remote programming and data logging functionality.

A programmable cyclic sequence of up to 20 sets of operational periods, voltage, & limiting current level can be set at the unit's keypad or by remote PC (Personal Computer) interface.

Groups of control settings and cyclic sequence can be stored in the PC and input to selected power supply via RS232/RS485.

With our supplied software, all the collected data of output voltage & current from each power supplies during operation can be stored as XLS (Excel™) file format in the PC.

When using RS-485, one personal computer can control and data log as many as 31 power supplies of different models of the same series.

In addition to our supplied software, Command Sets and Labview® driver are supplied with the unit so that users can integrate with their own software.

In the stand alone operation, the informative LCD display guides users for various functions such as preset output, programmable cyclic sequence operation.

In addition to the tracking OVP (Over output Voltage Protection), there is an upper output voltage limit which prevents voltage setting over the preset limit.

The output upper voltage limit is user preset.

This feature prevents damage to voltage sensitive load.

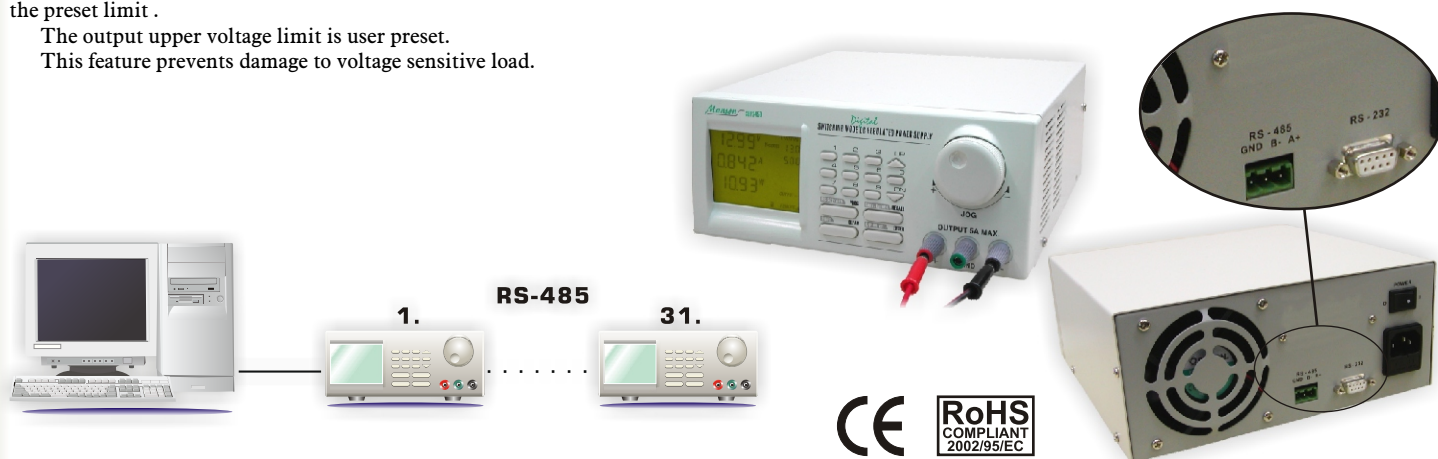
Main Features

- Full remote programming and data logging.
- Local or remote programmable cyclic run up to 20 sets of V, I, operational period.
- Built in RS-232/485 interface which controls up to 31 units.
- Supplied with software, command sets and Labview® driver.
- 9 user preset outputs at keypad
- CC & CV indicators with auto-cross over.
- 4 digit ammeter, voltmeter and power meter display.
- Tracking OVP and user preset max. output voltage.

Typical Applications

R&D works, Quality control, Production especially in applications which require groups of different settings of output voltage, current limit levels for various cyclic operation period and records of outputs readings with dynamic loading during tests.

It is ideal for applications with multiple power supplies at various locations with one centralized PC control.



Specifications

Output Voltage
Output Current
Output Rated Power
Ripple & Noise (Peak to Peak)
Load Regulation
Line Regulation
Input Voltage
Input Power
Power Factor
Display Meter
Meter Accuracy

LCD Dimension
Cooling System
Operating Temperature
Protections
Approvals
Dimensions (WxHxD)
Weight
Accessories

Optional Accessory
Remark

Remote Programming Specifications
Communication Interface
Remote Programming Functionality
Data logging
Baud Rate

SDP - 2210

1 - 20Vdc
0 - 10A
200W
30mV p-p
300mV
10mV
100 - 240Vac, 50Hz~ / 60Hz~
285W
≥0.9

4 digits - Display LCD Ammeter, Voltmeter and Power meter
(±1% + 5 counts for range V<5V, I<0.5A)
(±1% + 2 counts for range V≥5V, I≥0.5A)
48 x 66mm

Thermostatic Control Fan

0 - 40°C

Tracking OVP (Over Voltage Protection), Current Limiting, Over Temp. Protection

CE EMC : EN 55011, LVD : EN 61010

193 x 98 x 215mm / 7.6 x 3.9 x 8.5inch

3kgs / 6.6lbs

User Manual, Application Software for Windows®, Labview® Driver, VB Driver, Command Set, RS-232 Cable, RS-485, Connector and one 120ohm Resistor

RS-232 to RS-485 Adapter (ATR-2485)

Adjustable Upper Voltage Limit, Power Factor Correction

RS-232 and RS-485 (up to 31 Power Supplies)

Full control of power supply functions and data read-back

Yes, with supplied software

9600bps

SDP - 2405

1 - 40Vdc
0 - 5A

200mV

SDP - 2603

1 - 60Vdc
0 - 3A

150mV

Description

This family of high power remote sensing, remote control, switching mode CC/CV power supply offers unique solution for various loading conditions and applications.

The remote control functionality makes

1. output on/off possible without turning the power on/off switch of the unit.

2. adjusting the output voltage and current without turning the controls of the unit.

The remote sensing capability is important for load away from the power supply or when load current becomes erratic.

It is ideal for applications that require precise voltage at the point of application

When using it as a normal bench power supply, the 10-turn potentiometers provide precise output voltage and current control. The 4 digit LED meters with clear indication of automatic cross over of CC and CV mode provide easy read outs.

With the optional accessory, unit can be easily converted to 19" rack mount construction in less than 5 minutes.

It is suitable for a wide range of applications such as production testing, laboratory, field test of voltage critical distant load, telecommunications, powering of dc network and etc.

Features

- Remote control for output power on-off .
- Remote control for voltage and current adjustment.
- Remote sensing for remote point of precise voltage regulation.
- Do It Yourself 19" Rack Mount with optional accessory.
- High RFI stability.
- CC & CV mode with auto-cross over.
- Output Over Voltage Protection.
- Active Power Factor Correction.
- Overload, Over-temperature, Short circuit Protections
- 10-turn wire wound potentiometers .
- 4 digit LED A and V meters.
- Thermally controlled variable speed fan.
- Universal Input 100-240VAC



Assembled with Do It Yourself
19" Rack Mount Front Panel



Specifications

	SIM - 9106	SIM - 9303
Variable Output Voltage	1 - 15Vdc	1 - 30Vdc
Variable Output Current	1 - 60A	1 - 30A
Load Voltage Regulation	0.1% + 5mV	
Line Voltage Regulation	0.05% + 3mV	
Load Current Regulation	0.2% + 5mA	
Line Current Regulation	0.1% + 5mA	
Ripple & Noise (Peak - Peak)	50mV p-p	
Ripple & Noise (r.m.s.)	< 5mVrms	
Input Voltage	100 - 240Vac , 50 / 60Hz~	
Efficiency	≥ 82%	≥ 83%
Meter Type	LED Meter	
Voltmeter Range	4 digits - Display	
Ammeter Range	4 digits - Display	
Meter Accuracy	± 0.5% + 2 counts	
Protection Devices	Overload (Constant Current Limiting), Short Circuit, Over Temperature, OVP	
Cooling System	Variable Speed thermally Control Fan	
Special Feature	Remote Sensing, Remote Control	
Standard Accessory	Remote Control Plug, User Manual	
Optional Accessory	19" Rack Mount Kit (part no. SIM-9106 : 8781-9106-0000 / SIM-9303 : 8781-9303-0000)	
Approvals	CE EMC : EN 55011 , LVD : EN 61010	
Dimensions (WxHxD)	235 x 95 x 340mm / 9.3 x 3.8 x 13.4inch	
Weight	6kgs / 13.2lbs	
Remark	Power factor correction ≥ 0.97 at optional load	

Low Profile & Small Foot Print Fixed Voltage Switching Mode Power Supplies w Cigar Socket

SPA-8100 10A cont, 12A max @ 13.8V , SPA-8102 5A cont, 6A max @ 27.6V

Description

This series of convection cooled switching mode power supply is designed for radio equipment.

It is exceptionally immune to Radio Frequency Interference at close range.

Heat is dissipated from the heat sink and the aluminum base for efficient natural cooling.

It has the small footprint of popular radio transceivers, and the low profile casing make it fall in place with a host of equipment in a tight spot.

The constant current protection, over temperature protection with constant current and output Over Voltage Protection (OVP) ensure better reliability and safer protection to both the power supply and its connected load.

One main DC output at rear and a front mounted cigar socket provide convenient DC connectivity.

It has excellent line and load regulation, low ripple and noise , optimal efficiency of 80% and a power factor of 0.7.

Features

- Natural cooling for absolute quiet operation
- High RFI immunity
- Binding pole and cigar socket DC output.
- Over Load, Short Circuit, Over Temperature protections by constant current circuitry.
- Output Over Voltage Protection
- Power Factor Control
- User adjustable fine tune setting
13.3 ~14.5V (SPA-8100) & 26.6~29V (SPA-8102)



Specifications

Output Voltage

Output Current

(Main output posts)

(Main output posts + Cigar Socket)

Ripple & Noise

Load Regulation

Line Regulation

Input Voltage

Indicators

Cooling System

Operating Temperature

Protections

Approvals

Dimensions (WxHxD)

Weight

SPA-8100

Fixed 13.8Vdc $\pm 0.5V$

10A Cont. , 12A Max.

(1 min. 50% duty cycle)

10A Cont. , 12A Max.

(1 min. 50% duty cycle)

$\leq 50mVp-p$, $5mVrms$

$\leq 100mV$ (0 - 100% Load)

$\leq 50mV$ ($\pm 10\%$ Variation)

230Vac , 50Hz~ (or on request)

Red Color Overload LED Indicator

Air Convection

0 - 40°C

Over Load, Over Temperature, Short Circuit protections

by Constant Current Circuitry and Output Over Voltage Protection

CE EMC : EN 55022 , LVD : EN 60950

181 x 63 x 190 mm (7.2 x 2.5 x 7.5 in.)

Approx. 1.55kgs (3.4lbs)

SPA-8102

Fixed 27.6Vdc $\pm 0.5V$

5A Cont. , 6A Max.

(1 min. 50% duty cycle)

5A Cont. , 6A Max.

(1 min. 50% duty cycle)

SPA-8150 15A cont, 18A max @ 13.8V , SPA-8152 7.5A cont, 8.5A max @ 27.6V

Description

This quiet running, switching mode power supply is designed for radio equipment.

It is exceptionally immune to Radio Frequency Interference at close range.

The thermostatic variable speed cooling fan is hardly audible even at its maximum speed.

It has the small footprint of popular radio transceivers, and the low profile casing make it fall in place with a host of equipment in a tight spot.

The constant current protection, over temperature protection with constant current and output Over Voltage Protection (OVP) ensure better reliability and safer protection to both the power supply and its connected load.

One main DC output at rear and a front mounted cigar socket provide convenient DC connectivity. It gives a total continuous current output of 15A at 13.8V and a maximum of 18A at 50% duty cycle. It has excellent line and load regulation, low ripple and noise, optimal efficiency of 80% and a power factor of 0.7.

Features

- Fan cool
- High RFI immunity
- Binding pole and cigar socket DC output.
- Over Load, Short Circuit, Over Temperature protections by constant current circuitry.
- Output Over Voltage Protection
- Power Factor Control
- User adjustable fine tune setting
13.3 ~14.5V (SPA-8150) & 26.6~29V (SPA-8152)



Specifications

	SPA-8150	SPA-8152
Output Voltage	Fixed 13.8Vdc $\pm 0.5V$	Fixed 27.6Vdc $\pm 0.5V$
Output Current (Main output posts)	15A Cont. , 18A Max. (1 min. 50% duty cycle)	7.5A Cont. , 8.5A Max. (1 min. 50% duty cycle)
(Main output posts + Cigar Socket)	15A Cont. , 18A Max. (1 min. 50% duty cycle)	7.5A Cont. , 8.5A Max. (1 min. 50% duty cycle)
Ripple & Noise	$\leq 50mVp-p$, $5mVrms$	
Load Regulation	$\leq 100mV$ (0 - 100% Load)	
Line Regulation	$\leq 50mV$ ($\pm 10\%$ Variation)	
Input Voltage	230Vac , 50Hz~ (or on request)	
Indicators	Red Color Overload LED Indicator	
Cooling System	Fan Cool	
Operating Temperature	0 - 40°C	
Protections	Over Load, Over Temperature, Short Circuit protections by Constant Current Circuitry and Output Over Voltage Protection	
Approvals	CE EMC : EN 55022 , LVD : EN 60950	
Dimensions (WxHxD)	181 x 63 x 190 mm (7.2 x 2.5 x 7.5 in.)	
Weight	Approx. 1.7kgs (3.9lbs)	

All values are based on the Standard ambient Temperature 25°C and Pressure 0.1Mpa.

* SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE *

Low Profile & Small Foot Print Fixed Voltage Switching Mode Power Supplies w Cigar Socket

SPA-8230 23A cont, 25A max @ 13.8V , SPA-8232 11.5A cont, 12.5A max @ 27.6V

Description

This series of convection cooled switching mode power supply is designed for radio equipment.

It is exceptionally immune to Radio Frequency Interference at close range.

Heat is dissipated from the heat sink and the aluminum base for efficient natural cooling.

It has the small footprint of popular radio transceivers, and the low profile casing make it fall in place with a host of equipment in a tight spot.

The constant current protection, over temperature protection with constant current and output Over Voltage Protection (OVP) ensure better reliability and safer protection to both the power supply and its connected load.

One main DC output at rear and a front mounted cigar socket provide convenient DC connectivity.

It has excellent line and load regulation, low ripple and noise , optimal efficiency of 80% and a power factor of 0.7.

Features

- Fan Cool
- High RFI immunity
- Binding pole and cigar socket DC output.
- Over Load, Short Circuit, Over Temperature protections by constant current circuitry.
- Output Over Voltage Protection
- Power Factor Control
- User adjustable fine tune setting
13.3 ~14.5V (SPA-8230) & 26.6~29V (SPA-8232)



Specifications

Output Voltage

Output Current

(Main output posts)

(Main output posts + Cigar Socket)

Ripple & Noise

Load Regulation

Line Regulation

Input Voltage

Indicators

Cooling System

Operating Temperature

Protections

Approvals

Dimensions (WxHxD)

Weight

SPA-8230

Fixed 13.8Vdc $\pm 0.5V$

23A Cont. , 25A Max.
(1 min. 50% duty cycle)

23A Cont. , 25A Max.
(1 min. 50% duty cycle)

$\leq 50mV_{p-p}$, $5mV_{rms}$

$\leq 100mV$ (0 - 100% Load)

$\leq 50mV$ ($\pm 10\%$ Variation)

230Vac , 50Hz~ (or on request)

Red Color Overload LED Indicator

Fan Cool

0 - 40°C

Over Load, Over Temperature, Short Circuit protections
by Constant Current Circuitry and Output Over Voltage Protection

CE EMC : EN 55022 , LVD : EN 60950

181 x 63 x 190 mm (7.2 x 2.5 x 7.5 in.)

Approx. 1.55kgs (3.4lbs)

SPA-8232

Fixed 27.6Vdc $\pm 0.5V$

11.5A Cont. , 12.5A Max.
(1 min. 50% duty cycle)

11.5A Cont. , 12.5A Max.
(1 min. 50% duty cycle)

Description

This series of high current, fixed voltage, regulated switching mode power supplies are built with, Over Voltage Protection for safe-guarding voltage sensitive load. High efficiency cuts the running cost and dynamic Power Factor Corretor (PFC) maximizes the main's available power. They are suitable for applications in telecommunications such as radio equipments, RF amplifiers, and other high current applications like car audio, halogen, xenon spot light demonstrations.

The high grade Screw On output terminals are on the back panel of the console while the power on off switch and the bi-colour LED indicator (Power On /Overload) is at the front.

The variable speed thermostatic control cooling fan ensures quiet operation of the power supply in medium load condition.

The small size console fits well with the footprints of most modern telecom equipments.

Features

- High RFI stability
- Over voltage protection at 16.5V
- Current fold-back circuit with LED indicator
- Short circuit protection
- Over temperature cut off protection
- High efficiency >78%
- Power factor correction >0.95
- Variable speed Thermostatic controlled fan quiet operation
- Light weight and small size
- Housing are available in (Pantone warm grey 1C or Pantone 433C dark grey)



Specifications

	SPA-8250	SPA-8400
Fixed Output Voltage	Fixed 13.8Vdc	Fixed 13.8Vdc
Rated Output Current	25A	40A
Ripple & Noise (Peak-Peak)	50mV	
Load Regulation	200mV	
Line Regulation	50mV	
Input Voltage	230Vac , 50Hz~ (or on request)	
Efficiency	>78%	
Dynamic Power Factor Correction	>0.95	
Cooling Method	Variable speed thermally control fan	
Protection Devices	Over Load, Over Temperature, Short Circuit protections and Output Over Voltage Protection	
Indicators	Bi-Color LED (Green : Power ON / Red : Overload)	
Approvals	CE EMC : EN 55022 , LVD : EN 60950	
Dimensions (WxHxD)	220 x 110 x 220 mm (8.7 x 4.3 x 8.7 in.)	220 x 110 x 300 mm (8.7 x 4.3 x 11.8 in.)
Weight	2.7kgs (5.9lbs)	3.5kgs (7.7lbs)

All values are based on the Standard ambient Temperature 25°C and Pressure 0.1Mpa.

* SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE *

High Current Rack Mount Switching Mode Power Supply

SPP - 8250 / 8251

Description

This series of U2 ,19-inch rack mount, high current, regulated switching mode power supplies are built with ,Over Voltage Protection for safe-guarding voltage sensitive load. They are suitable for applications that require clean, stable, DC power source such as in telecommunications, audio and digital systems , transceivers and amateur radios.

The dynamic Power Factor Corrector (PFC) maximizes the main's available real power and minimizes harmonics back to the mains thus beneficial for other AC equipments in the cabinet rack. The high efficiency of this switching power supply cuts the running cost .

The high grade Screw On output terminals are on the back panel of the casing while the power on off switch and the red LED overload indicator is at the front panel.

The variable speed thermostatic control 8cm cooling fan ensures quiet operation of the power supply even in medium load condition.

The casing is made of powder coated galvanized steel with anodized aluminum front panel and handles.

Features

- High RFI stability
- Over voltage protection
- Current fold back overload protection with red LED indicator
- Short circuit protection
- Over temperature cut off protection
- High efficiency >78%
- Power Factor Correction >0.95
- Variable speed thermostatic controlled fan for quiet operation.
- Light weight and small size.



Specifications

	SPP - 8250	SPP - 8251
Rated Output Voltage	3 - 15VDC	Fixed 13.8VDC
Rated Output Current	25A	28A
Ripple & Noise (Peak-Peak)	50mVp-p	
Load Regulation	200mV (0 - 100% Load)	
Line Regulation	50mV ($\pm 10\%$ Variation)	
Input Voltage	230Vac , 50Hz~ (or on request)	
Efficiency	>0.78%	
Dynamic Power Factor Correction	>0.95	
Cooling Method	Variable speed thermally control fan	
Protection Devices	Over Load, Over Temperature, Short Circuit Protection and Output Over Voltage Protection	
Indicators	Red Color Overload LED Indicator	
Meter Type	Analog	
Approvals	Design & Manufacture to comply with CE EMC LVD Standards	
Dimensions (WxHxD)	Main Case 220 x 89 x 225 mm (8.7 x 3.5 x 8.9 in.)	
Construction	U2 19inch Rack Mount, power coated galvanized steel casing, anodized aluminum front panel and handles	
Weight	Approx. 3.5kgs (7.7lbs)	

All values are based on the Standard ambient Temperature 25°C and Pressure 0.1Mpa.

* SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE *

Description

This series of 200 Watts LABORATORY GRADE SWITCHING DC POWER SUPPLIES are built with precision coarse and fine output voltage and current limiting controls. The OVP (output over voltage protection) protects voltage sensitive load by instant shutting down the supply when output voltage is in excessive to the set voltage due to line surge or otherwise. Current limiting control with automatic cross over of constant voltage (CV) and constant current (CC) mode makes this series ideal for R&D work in laboratory situations.

Features

- 200 Watts output power
- Coarse and Fine Voltage / Current controls
- Auto-cross over CV and CC
- LED indicators for CV and CC mode
- Low ripple and noise
- Excellent load and line regulation
- Thermostat control fan cooling
- 3½ digit displays of voltmeter and ammeter
- OVP, Overload, Short circuit and Over temperature protections
- Output ON-OFF push button



Specifications

	<i>SPS - 2210</i>	<i>SPS - 2405</i>	<i>SPS - 2603</i>
Output Voltage	1 - 20VDC	1 - 40VDC	1 - 60VDC
Output Current Control	Fine and Coarse Adjust		
Rated Output Current	0 - 10A	0 - 5A	0 - 3.3A
Output Current Control	Fine and Coarse Adjust		
Ripple & Noise (Peak-Peak)	20mVp-p		
Load Regulation	0.5% + 250mV	0.5% + 200mV	0.5% + 200mV
Line Regulation	50mV		
Input Voltage	90 - 265Vac , 50/60Hz~		
Meter Type	Digital LED		
Voltmeter Range	3½ digit LED		
Ammeter Range	3½ digit LED		
Meter's Accuracy	1% + 2 counts		
Indicators	Constant Current & Constant Voltage		
Cooling System	Thermostatic control fan		
Protection Devices	Over Voltage, Short Circuit, Over Temperature		
Approvals	CE EMC : EN 55011 , LVD : EN 61010		
Dimensions (WxHxD)	205 x 115 x 275 mm (8 x 4.5 x 10.8 in.)		
Weight	3kgs (6.6lbs)		

900W Reversible Polarity & AH Meter Switching Mode DC Regulated Power Supply

SPS - 5600 / 5602

Description

This series of power supplies are designed for the Electrochemical surface treatment industry.

This 900W switching mode DC regulated power supply is designed for applications which require frequent reverse polarity operations and logging of precise Ampere Hour record.

Electronic safety locking of the Reverse Polarity Switch such that when the in process current is higher than 2Amp, the switch is deactivated. The switch becomes functional again when load is taken away or load current is less than 1

This power supply provides high current with constant current limiting protection, and a highly efficient Active Power Factor Correction.

High quality wire wound potentiometer is used for voltage control for precision adjustment of the output voltage.

Features

- Designed for Electrochemical treatment Industries.
- Reversible Polarity with Auto Lock Protection (2Amp)
- Precision 6digit AH meter with Logging & Reset
- Constant Current Protection
- Active Power Correction
- Wire Wound Potentiometer
- Floating Ground Design
- Constant Current Protection



Specifications

	SPS - 5600	SPS - 5602
Variable Output Voltage	1 - 15Vdc	1 - 30Vdc
Rated Output Current	60A	30A
Ripple & Noise (Peak-Peak)	100mVp-p	
Load Regulation	250mV	
Line Regulation	10mV	
Input Voltage	100 - 240Vac , 50/60Hz~	
Efficiency	>81%	
Dynamic Power Factor Correction	>0.97 at optimal load	
Voltmeter & Ammeter Display	4 digit LED display	
Meter's Accuracy	±1% +1 digit	
Indicators	Red LED for overload / Short circuit indication Reverse Polarity Indicator	
Special Features	Reverse Polarity Switch with electronic safety lock out at load current high than 2A AH Meter with Reset	
AH Meter Specification	6 digit display (999999) ; 14.2mm Red LED Accuracy 5% of reading value	
Cooling Method	Variable speed thermally control fan	
Operating Temperature	0 - 40°C	
Protection	Overload (Constant Current Limiting), Short Circuit, Over temperature and Output Over Voltage Protection OVP	
Approvals	CE EMC : EN 55011 , LVD : EN 61010	
Dimensions (WxHxD)	425 x 125 x 355 mm (16.7 x 4.9 x 14 in.)	
Weight	8.7kgs (19lbs)	

All values are based on the Standard ambient Temperature 25°C and Pressure 0.1Mpa.

* SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE *

Description

This portable, compact & light weight, fixed 12V regulated DC power supply provides a stable output voltage regardless of current drain to 3A continuous operation. It is suitable for voltage sensitive devices like, CCTV cameras, Intercom, Scanners, CB Radios and Power supply for the hobbyist.

The latest switching mode circuitry makes this unit a High efficient, Reliable and Highly stable regulated power supply at a competitive price.

Features

- Fixed 12V DC output
- Regulated stable output
- Overload and Short circuit protection
- LED power on indicator
- Poly-carbonate housing
- Streamline design for desktop operation



Specifications

	<i>SPS - 8040</i>	<i>SPS - 8042</i>
Output Voltage	12VDC	13.8VDC
Rated Output Current	3A	3A
Peak Output Current	5A	5A
Load Regulation	300mV	100mV
Line Regulation	60mV	50mV
Ripple & Noise (Peak-Peak)	60mVp-p	50mVp-p
Input Voltage	230Vac , 50Hz~ (or on request)	
Indicators	Power on LED	
Cooling System	Natural Convection	
Protection Devices	Output Over Load and Short Circuit Protection	
Approvals	CE EMC : EN 60950 LVD : 55022	
Dimensions (WxHxD)	90 x 50 x 140 mm (3.6 x 1.9 x 5.5 in.)	
Weight	450g (16oz.)	

Multi - Voltage Switching Mode Regulated Power Supply

SPS - 8041

Description

This portable, compact & light, regulated DC power supply provides a range of stable output voltages regardless of current drain to 3A continuous operation.

This output voltage is user selectable at the front panel. It is suitable for voltage sensitive devices like, CCTV cameras, Intercom, Scanners, CB Radios and Power supply for the hobbyist.

The latest switching mode circuitry makes this unit a High efficient, Reliable and Highly stable regulated power supply at a competitive price.

Features

- User selectable output voltages at 3, 4.5, 6, 7.5, 9, 12VDC
- Continuous 3A operation
- Overload and Short circuit protection
- LED power on indicator
- Poly-carbonate housing
- Streamline design for desktop operation



Specifications

	SPS - 8041
Output Voltage	3, 4.5, 6, 7.5, 9, 12VDC
Rated Output Current	3A
Peak Output Current	5A
Load Regulation	300mV
Line Regulation	60mV
Ripple & Noise (Peak-Peak)	60mVp-p
Input Voltage	230Vac , 50Hz~ (or on request)
Indicators	Power on LED
Cooling System	Natural Convection
Protection Devices	Output Over Load and Short Circuit Protection
Approvals	CE EMC : EN 60950 LVD : 55022
Dimensions (WxHxD)	90 x 50 x 140 mm (3.6 x 1.9 x 5.5 in.)
Weight	450g (16oz.)

Description

The series of HIGH POWER SWITCHING MODE DC REGULATED POWER SUPPLIES provide high current 25 Amps output in a lightweight and compact size case. They are suitable for a wide range of uses, such as radio equipment, and are ideal for high power car stereo work. In addition to variable output from 3 to 15VDC, a fixed 13.8VDC can be selected. Overload, Over temperature, and Over voltage protection are standard.

Features

- 25A current output
- High efficiency
- Adjustable output voltages 3V to 15V
- 13.8V lock control
- Light weight and small size
- Overload temperature protection
- Over voltage protection at 16.5V
- Variable speed thermally controlled fan.
- High RFI stability
- Power factor correction >0.95
- Housing are available in Pantone warm grey 1C or Pantone 433C dark grey



Specifications

	SPS - 8250	SPS - 9250
Variable Output Voltage	3 - 15Vdc	
Fixed Output Voltage Mode	13.8Vdc	
Rated Output Current	25A	
Ripple & Noise (Peak-Peak)	50mV	
Load Regulation	200mV	
Line Regulation	50mV	
Input Voltage	230Vac , 50Hz~ (or on request)	
Efficiency	>78%	
Meter Type	Analog Meter	LED Meter
Voltmeter Range	0 - 20V	3 digit display
Ammeter Range	0 - 30A	3 digit display
Meter's Accuracy	7% fsd	1% + 2 counts
Cooling System	Variable speed thermally control fan	
Protection Devices	Overload, Over Temperature, Short Circuit, OVP protections	
Approvals	CE EMC : EN 55022 , LVD : EN 60950	
Dimensions (WxHxD)	220 x 110 x 220 mm (8.7 x 4.3 x 8.7 in.)	
Weight	2.7kgs (6lbs)	
Remarks	Power factor correction >0.95 at optimal load	

High Current Switching Mode DC Regulated Power Supply

SPS - 9252

Description

The HIGH POWER SWITCHING MODE DC REGULATED POWER SUPPLY provides 12 Amps output in lightweight and compact size case. They are suitable for a wide range of uses, such as mobile radio equipment. In addition to variable output from 3 to 30VDC, a fixed 13.8VDC can be selected.

Overload, Over temperature, and Over voltage protection are standard.

Features

- 12A current output
- High efficiency
- Adjustable output voltages 3V to 30V
- 13.8V Lock Control
- Light weight and small size
- Overload temperature protection
- Over voltage protection at 33V
- Variable speed thermally controlled fan
- High RFI stability
- Power factor correction >0.95
- Housing are available in Pantone warm grey 1C or Pantone 433C dark grey



Specifications

Variable Output Voltage	3 - 30Vdc
Fixed Output Voltage Mode	13.8Vdc
Rated Output Current	12A
Ripple & Noise (rms)	5mVrms
Load Regulation	200mV
Line Regulation	50mV
Input Voltage	230Vac , 50Hz~ (or on request)
Efficiency	>82%
Meter Type	LED Meter
Voltmeter Range	3 digit display
Ammeter Range	3 digit display
Meter's Accuracy	1% +2 counts
Cooling System	Variable speed thermally controlled fan
Protection Devices	Overload, Over Temperature, Short Circuit, OVP protections
Approvals	CE EMC : EN 55022 , LVD : EN 60950
Dimensions (WxHxD)	220 x 110 x 220 mm (8.7 x 4.3 x 8.7 in.)
Weight	2.7kgs (6lbs)
Remarks	Power factor correction >0.95 at optimal load

All values are based on the Standard ambient Temperature 25°C and Pressure 0.1Mpa.

* SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE *

Description

The series of HIGH POWER SWITCHING MODE DC REGULATED POWER SUPPLIES provide high current 40 Amps output in a lightweight and compact size case. They are suitable for a wide range of uses, such as radio equipment, and are ideal for high power car stereo work. In addition to variable output from 3 to 15VDC, a fixed 13.8VDC can be selected. Overload, Over temperature, and Over voltage protection are standard.



Features

- 40A current output
- High efficiency
- Floating Ground Design
- Adjustable output voltages 3V to 15V
- Fixed voltage mode at 13.8V
- Light weight and small size
- Overload temperature protection
- Constant Current Protection
- Over voltage protection at 16.5V
- Variable speed thermally controlled fan
- High RFI stability
- Power factor correction >0.95
- Housing are available in Pantone warm grey 1C or Pantone 433C dark grey



Specifications

	SPS - 8400	SPS - 9400
Variable Output Voltage	3 - 15Vdc	
Fixed Output Voltage Mode	13.8Vdc	
Rated Output Current	40A	
Ripple & Noise (Peak-Peak)	50mV	
Load Regulation	200mV	
Line Regulation	50mV	
Input Voltage	230Vac , 50Hz~ (120Vac / 60Hz~ or on request)	
Efficiency	>78%	
Meter Type	Analog Meter	LED Meter
Voltmeter Range	0 - 20V	3 digit display
Ammeter Range	0 - 45A	3 digit display
Meter's Accuracy	7% fsd	1% + 2 counts
Cooling System	Variable speed thermally controlled fan	
Protection Devices	Overload, Over Temperature, Short Circuit, OVP protections	
Approvals	CE EMC : EN55011 EN55022 , LVD : EN 60950 EN61558	
Dimensions (WxHxD)	220 x 110 x 300 mm (8.7 x 4.3 x 11.8 in.)	
Weight	3.5kgs (7.7lbs)	
Remarks	Power factor correction >0.95 at optimal load	

High Current Switching Mode DC Regulated Power Supply

SPS - 9402

Description

The series of HIGH POWER SWITCHING MODE DC REGULATED POWER SUPPLIES provide high current 20 Amps output in a lightweight and compact size case. They are suitable for a wide range of uses, such as radio equipment, and are ideal for high power car stereo work. In addition to variable output from 3 to 30VDC, a fixed 13.8VDC can be selected. Overload, Over temperature, and Over voltage protection are standard.

Features

- 20A current output
- Floating Ground Design
- Adjustable output voltages 3V to 30V
- 13.8V Lock Control
- Light weight and small size
- Overload temperature protection
- Constant Current Protection prevents overloading
- Over voltage protection at 33-35V
- Variable speed thermally controlled fan
- High RFI stability
- Power factor correction >0.95
- Housing are available in Pantone warm grey 1C or Pantone 433C dark grey



Specifications

Variable Output Voltage	3 - 30Vdc
Fixed Output Voltage Mode	13.8Vdc
Rated Output Current	20A
Ripple & Noise (Peak-Peak)	50mV
Load Regulation	200mV
Line Regulation	50mV
Input Voltage	230Vac , 50Hz~ (120Vac / 60Hz~ or on request)
Efficiency	>78%
Meter Type	LED Meter
Voltmeter Range	3 digit display
Ammeter Range	3 digit display
Meter's Accuracy	1% +2 counts
Cooling System	Variable speed thermally controlled fan
Protection Devices	Overload, Over Temperature, Short Circuit, OVP protections
Approvals	CE EMC : EN55011 EN55022 , LVD : EN 60950 EN61558
Dimensions (WxHxD)	220 x 110 x 300 mm (8.7 x 4.3 x 11.8 in.)
Weight	3.5kgs (7.7lbs)
Remarks	Power factor correction >0.95 at optimal load

All values are based on the Standard ambient Temperature 25°C and Pressure 0.1Mpa.

* SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE *

Description

This high current switching mode DC regulated output power supply is designed with a highly efficient active power factor corrector. The constant current limiting protection allows the output current to remain stable but the output voltage decreases to a level that permits safe operation of the power supply.

The remote sensing terminals are used to compensate for output line losses so that a precise regulation can be achieved for critical voltage application away from the power supply.

The output voltage level and ON-OFF can be externally controlled via the remote terminal.

It is ideal for applications that need good quality high DC current network with precise point of voltage regulation.

SPS-9600 / SPS-9602 has a small footprint for its 900W continuous maximum power.

It is suitable for a wide range of applications such as street blaster super high power car audio demonstration console, radio equipment and etc.

Features

- Total max. continuous output current 60A (SPS-9600) / 30A (SPS-9602)
- Main Output /Remote Sensing/ Remote Control/ terminals at the back
- Front terminals 5A (SPS-9600) / 3A (SPS-9602) limiting.
- (Precise Load Point Voltage)
- Remote Sensing for remote point of regulation.
- Remote control terminals for output voltage adjustment and *on/off*
- 29HR Count Down Timer (Optional) for Output ON/OFF
- Floating Ground Design
- Overload / Over-temperature / Short Circuit Protections
- Constant Current mode with LED indicator prevents overloading
- Variable speed thermally controlled fan
- High RFI stability
- Active power factor correction (P.F. >0.97)
- Housing are available in Pantone warm grey 1C or Pantone 433C dark grey
- ***Remote output on/off is an added function for production after Oct. 2004***



Specifications

	SPS - 9600	SPS - 9602
Variable Output Voltage	1 - 15Vdc	1 - 30Vdc
Total Rated Output Current (Main Output + Front Output)	60A	30A
Rated Output Current (Main Output)	60A	30A
Rated Output Current (Front Output)	5A	3A
Load Regulation (Main Output)	0.1% +5mV	
Line Regulation (Main Output)	0.05% +3mV	
Ripple & Noise (Peak-Peak)	50mVp-p	
Input Voltage	230Vac , 50Hz~ (or on request)	
Efficiency	>85%	
Meter Type	LED Meter	
Voltmeter Range	3 digit display	
Ammeter Range	3 digit display	
Meter's Accuracy	±1% +1 count	
Protection Devices	Overload (Constant Current Limiting), Over Temperature, Short Circuit, OVP protections	
Cooling System	Variable speed thermally controlled fan	
Special Feature	Remote sensing , Remote output voltage control and *on/off *	
	* Remote output on/off only for production after Oct. 2004 *	
Approvals	CE EMC : EN 55022 , LVD : EN 60950	
Dimensions (WxHxD)	220 x 110 x 360 mm (8.7 x 4.3 x 14 in.)	
Weight	5.8kgs (12.8lbs)	
Remarks	Power factor correction >0.95 at optimal load	

All values are based on the Standard ambient Temperature 25°C and Pressure 0.1Mpa.

* SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE *

High Current Switching Mode DC Regulated Power Supply

SPS - 9620

Description

The SPS-9620 DC power supply has been designed for professional applications which require quality high current for equipments such as super power car audio that are normally operated from twelve volt batteries.

The output is current limited at just over 120A and this current output can be supplied continuously.

The output voltage has Over Voltage Protection at about 17V to ensure very high protection against power supply failure, thus offering full protection to the powered equipment.

The excellent load regulation is further enhanced with remote sensing terminals to give precise voltage at the point of application for long connecting leads.

The output voltage range can be easily fine tuned between 12.6V to 14.3V via a concealed trimmer. This covers most 12V battery sources such as six lead -acid cells (13.8V) or ten nickel-cadmium cells (12.6V) and etc.

The excellent Dynamic Power Factor Correction (>0.9) reduces unnecessary power loss (cuts electricity cost in some countries) and cuts the noise and EMI to your power mains.

Features

- Output Over Voltage Protection at 16.5V Trimmer fine tune output voltage 12.6 to 14.3 V for 13.8 V nominal.
- Constant Current Limiting Over Load Protection Short circuit and Over temperature Protection.
- Green LED for power on/off indication
- Red LED for overload / short circuit protection
- Excellent line and load regulation.
- Remote sensing terminal for precise voltage load with long leads.
- Low ripple and noise
- Cooling fan is on all the time, speed of fan increase with temperature of unit.
- High efficiency 85%
- CE Approval : EN55022, EN61000, EN-55024
- IEC 60950:1999+Corr.Jan.2000, EN 60950:Corr.Feb.2002
- Light weight and Compact: 11Kg., 23W x 22H x 34D cm



Specifications

Output Voltage	Fixed 13.8Vdc (Fine Tune 12.6-14.3Vdc)
Rated Output Current	120A
Ripple & Noise (Peak-Peak)	40mV p-p
Load Regulation (with sense)	0.1% +5mV
Load Regulation (with no sense)	0.1% +5mV
Line Regulation	0.05% +3mV
Input Voltage	230Vac , 50Hz~ (or on request)
Efficiency	>85%
Dynamic Power Factor Correction	>0.97 at optimal load
Indicator	Green LED for power on/off indication, Red LED for overload/short circuit indication
Special Feature	Remote Sensing
Cooling Method	Variable speed thermally static control fan
Operating Temperature	0 - 40°C
Protections	Overload (Constant Current Limiting), Short Circuit, Over Temperature, OVP
Approvals	CE EMC : EN55022 , LVD : EN 60950
Dimensions (WxHxD)	235 x 218 x 345 mm (9.3 x 8.6 x13.6 in.)
Weight	11kgs (24lbs)

All values are based on the Standard ambient Temperature 25°C and Pressure 0.1Mpa.

* SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE *

Description

This 80Watt constant power design allows a much wider range of output current and voltage than the most power supplies in the same category. The 3 voltage and current range selections in effect is like having 3 power supplies with different output range.

It has constant voltage and automatic cross over constant current, adjustable over voltage protection setting, high precision 4 digit meters making it an ideal choice for R&D bench top power supply.

Features

- Switching Mode Power Supply with Dynamic PFC
- 80W Constant Power conversion in 3 selectable ranges:
- 0~16V/0~5A; 0~27V/0~3A; 0~36V/0~2.2A
- User preset output voltage, current and over voltage protection limits.
- 4 digit LED Meter displays
- Output On-Off switch allows presetting of output voltage and current limiting in Off mode to ensure safe operating V&I limits when back to On mode.
- Remote sensing for accurate applied voltage at load point
- Output terminals at front and rear panels for easy operation.

Specifications

Input AC Voltage Range

No load Input Current at 230Vac

Full Load Input Current at 230Vac

AC Input Frequency

Efficiency

Power Factor

Constant Voltage and Current Range Selection:

0-16V / 5A selection I

0-27V / 3A selection II

0-36V / 2.2A selection III

Constant Voltage Characteristics :

Load Regulation (0-100%)

Line Regulation ($\pm 10\%$)

Ripple & Noise (peak to peak)

Constant Current Characteristics :

Load Regulation (0-100%)

Line Regulation ($\pm 10\%$)

Meter Accuracy :

Voltmeter Accuracy

Ammeter Accuracy

Protection

Output Terminals

Additional Function

CE Approvals

Cooling

Dimensions in mm (WxHxD)

Weight in Kg

SSP - 7080

90 - 264Vac

$\leq 0.1A$

$\leq 0.5A$

47 - 63Hz~

$\geq 75\%$

≥ 0.9

0 - 16.4V 0 - 5.1A

0 - 27.6V 0 - 3.1A

0 - 36.8V 0 - 2.3A

$\leq 20mV$

$\leq 4mV$

$\leq 30mV$

$\leq 10mA$

$\leq 10mA$

$\pm 1\% + 2$ counts

$\pm 1\% + 2$ counts

Adjustable Upper Voltage Limit,

Current Limiting Protection, Short Circuit, Overload,

Over Temperature Protection

Front and Back of housing

Remote Sensing

LVD : EN 61010 , EMC : EN 55011

Natural Convection

53.5 x 127 x 330mm / 2 x 5 x 13inch

Approx. 1.9Kgs / 4.2Lbs



Remote Programmable Constant Power Switching Mode power supply with Ethernet Network Connectivity / 3 DC Voltage Ramp Generators / 32 bit MCU

SSP - 8080 Next Generation Power Supply

Description

The constant power design allows a much wider range of output current and voltage than the most power supplies in the same category. The 3 voltage and current range selections in effect is like having 3 power supplies with different output range.

An advanced ARM construction RISC 32bit Micro-Processor is used to provide the following unique features .

Three unique voltage generators and remote programming of accurate voltage and current, data logging of output voltage and current.

Through the various combinations of the settings in the time gradient and the duration of the voltage generators, miscellaneous repeatable ramp up / down, step, irregular wave form of output voltages can be generated from values of V, I & ΔT .

It is ideal for R&D, education, production, burn-in test especially for devices when the effect of irregular dc input is critical.

The standard communication port provided is USB1.1 which can be connected to your personal computer. Remote Control functions like output on-off, voltage and current adjustment, selection of voltage and current ranges can be done through your PC .

With the Ethernet control board (optional) and the ETHERNET /USB router, connection to LAN or WAN network is made possible. One PC can remotely control and monitor 250 power supplies with C type Ethernet and more for B and A type networks.

It opens the door to use with all sorts of control and monitor software in cycling and output data acquisition even through the internet.

We provide application software, USB driver, command sets, Ethernet setting software, and Labview® driver for Ethernet .

This Ethernet / Internet ready SMPS is the dream power supply for the network savvy engineers to have the controls, monitoring and output data logging to be done via the internet in real time situation.

Specifications

Input AC Voltage Range

No load Input Current at 230Vac

Full Load Input Current at 230Vac

AC Input Frequency

Efficiency

Power Factor

Constant Voltage and Current Range Selection:

0-16V / 5A Range I

0-27V / 3A Range II

0-36V / 2.2A Range III

Constant Voltage Characteristics :

Load Regulation (0-100%)

Line Regulation ($\pm 10\%$)

Ripple & Noise (peak to peak)

Constant Current Characteristics :

Load Regulation (0-100%)

Line Regulation ($\pm 10\%$)

Meter Accuracy :

Voltmeter and Ammeter Accuracy

User Adjustable Upper Current and Voltage Limits

Number of Preset Recalls of Frequent use V&I Setting

Remote Sensing

Ramp Step Irregular Waveform Functions

Number Voltage Generators ($\Delta V / \Delta t$)

Available Number of Combinations of Voltage Generators

Settable Output Time Period of each Voltage Generator

Settable Time Period one Voltage Generator to another

Remote Programmable / Control by PC

Protection

Standard Communication Port

Optional Interface Accessory

Provided Software

CE Approvals

Cooling

Dimensions in mm (WxHxD)

Weight in Kg

SSP - 8080

100 - 240Vac

$\leq 0.1A$

$\leq 0.5A$

47 - 63Hz~

$\geq 75\%$

≥ 0.9

0 - 16.4V 0 - 5.1A

0 - 27.6V 0 - 3.1A

0 - 36.8V 0 - 2.3A

$\leq 20mV$

$\leq 4mV$

$\leq 30mV$

$\leq 10mA$

$\leq 10mA$

$\pm 1\% + 2$ counts

Yes

3

Yes

3 (A, B, C)

6 (AB, BA, AC, CA, BC, CB)

0 to 600 seconds

0 to 20 seconds

Output ON/OFF, Voltage & Current Control, Selection of Voltage and Current Range, Programmable of cyclic output and data logging of output

Adjustable Over Voltage Protection, Current Limiting Protection, Short Circuit, Overload, Over Temperature Protection

USB 1.1

Ethernet Control Broad (ZNE-100PT) Factory Pre-installed or User Installable

USB Driver, Command Sets, Ethernet Setting Software, Labview® Driver for Ethernet

LVD : EN 61010 , EMC : EN 55011

Natural Convection

53.5 x 127 x 330mm / 2 x 5 x 13inch

Approx. 1.9Kgs / 4.2Lbs

Features

Electrical

** Switching Mode Power Supply with Dynamic PFC

** 80W Constant Power Supply in 3 selectable ranges:

0~16V/0~5A ; 0~27V/0~3A ; 0~30V/0~2.2A

** Adjustable Upper Current and Voltage Limits in addition to the tracking OVP and CC.

** Separate indicator for Upper Current and Voltage Limits and Over Temperature

** 4 digit LED meter displays and output on/off switch

** Coarse and fine tune selection

** 3 sets of user preset V and I Recalls (A, B, C), for quick access of frequent V&I settings.

** Key pad lock and unlock function

** Remote sensing for accurate applied voltage at load point

DC Ramp, Step & Irregular Wave Function

** 3 sets of Voltage Generators with 0 to 600 seconds output time

** Preset time period from one Voltage Generator to another is 0 to 20 seconds

** Any 2 Voltage Generators can merge to form ramp up, ramp down Step, Irregular waveform, in various duty cycles.

Remote Program & Network connectivity

** Remote control and programming of output on off, voltage & current setting, Choice of power supply range , and data logging to PC.

** USB1.1 port for PC interface with Ethernet router to Lan or Wan network and to the internet.

** One PC can control and monitor over 250 power supplies in the C Ethernet

** Supply of application software, USB driver, command sets, Ethernet setting software and Labview® driver for Ethernet.



All values are based on the Standard ambient Temperature 25°C and Pressure 0.1Mpa.

* SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE *

Switching Mode Programmable Automatic Charger for Lead-Acid Battery

SBC - 8112 / 8125 / 8215

Description

This series of Switching Mode Automatic Chargers are built for high current charging of flood and sealed (Gel and AGM) types of Lead Acid Batteries. Charger can be safely left connected to battery all the time . Charging battery under loading is an added feature.

User selection of suitable Boost charge voltage according to battery manufacturer, recommendation, and the discharged state of the battery as well. Good line regulation and the switching mode technology allow large fluctuation of input voltage as typically as from dock power or generators. These plus the low ripple DC output will prolong the life of the batteries. Remote temperature sensor to protect battery from overheat during charging.

Safety Features

- Overload and Short Circuit protection
- Reverse polarity protection
- Over temperature protection to batteries by remote sensor
- Transformer isolated to protect against electrolysis

Features

- Two step charging
- Suitable for all types of Lead Acid Batteries
- Selection of Boost charge voltage and Semi Boost charge according to type and discharge state of battery
- Automatically change between float and boost charging mode
- Timed charging mode available. (2/4/8hrs. factory preset)
- Charger can be left connected to battery permanently
- LED indicator for different charging mode and battery over temperature
- Wide Input Voltage Range with good line regulation
- Active Power Factor Correction (available in Standard CE version / optional on other version)
- High Efficiency 80%
- Light and Compact



Specifications

	<i>SBC - 8112</i>	<i>SBC - 8125</i>	<i>SBC - 8215</i>
Applicable Battery			
Battery Type	Flood, Sealed (Gel, AGM)		
Battery Voltage	12VDC	12VDC	24VDC
Recommended Battery Capacity	60 - 150AH	120 - 200AH	60 - 150AH
Output (@ 25°C)			
Rate Current	10A Continuous	20A Continuous	10A Continuous
Float Mode Voltage	13.4VDC	13.4VDC	26.8VDC
Boost Mode Voltage	Wet-14.4 Sealed-13.9VDC	Wet-14.4 Sealed-13.9VDC	Wet-28.8 Sealed-27.8VDC
Charge Indicator LED	Green - Boost, Off - Float , Red - Battery Over Temperature		
Line Regulation	100mV		
Load Regulation (0-100% Load)	200mVrms		
Ripple & Noise (RMS)	25mV		
Efficiency	80%		
Input			
Voltage Range	200 - 250V~ or 90 - 132V~ on request		
Frequency	50Hz - 60Hz		
Active Power Factor Correction	Available in standard CE version / Optional on other version		
Protection			
Overload Protection	Yes		
Short Circuit Protection	Yes		
Reverse Polarity Protection	Fuse Protected		
Battery Over Temperature	Yes (optional temperature sensor)		
Cooling System	Current Controlled Fan		
Approvals	Designed and Manufactured to Comply with CE		
Dimensions (WxHxD)	214 x 160 x 72mm 8.4 x 6.3 x 2.8in.	255 x 200 x 72mm 10 x 7.9 x 2.8in.	255 x 200 x 72mm 10 x 7.9 x 2.8in.
Weight	1.65kgs (3.6lbs)	2kgs (4.4lbs)	2kgs (4.4lbs)

All values are based on the Standard ambient Temperature 25°C and Pressure 0.1Mpa.

* SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE *

SBC - 2105(5A) 12VDC Series

Description

This compact, robust and light weight battery charger gives a complete and fast charge to sealed and wet type of lead acid battery.

In the Bulk Charge Stage, it charges the battery at a constant maximum current until the battery voltage increases to a slightly higher level and switches to the Absorption Mode at which the battery is then kept at this voltage while the charging current decreases to a low value.

When the battery is fully charged, the charger is then switched to the Float Charge voltage where it can be maintained indefinitely. At the Float Charge Mode, the charger will make up for the loss of self discharge of the battery.

This charger has two selections to cover a wide range of sealed (VRLA) and the wet type of lead acid battery. In addition to the standard short circuit, over Load, over temperature protections, it has electronic reversed polarity protection, output over voltage protection, and battery low voltage protection to prevent damage to the charger and the battery.

Features

- ** 3 Stage (IUOU) Switching Mode Lead Acid Battery Charger.
- ** 2 Selectable Bulk Absorption-Float Charge Settings for Sealed & Wet battery.
- ** LED indicators for charging and Full /Float mode.
- ** Wide Input Tolerance for fluctuating mains voltage
- ** Protections to the charger and battery
Output Short Circuit, Over Load,
Over Temperature, Reverse Polarity.
- ** Protection to the battery
OVP (Over Voltage Protection) the charger will cut off output when output voltage is over 15.5V, this gives complete protection the battery.
- ** Battery Under-Voltage Protection
When voltage of the charged battery is less than 7.5V, the charger will stop charging the battery which may be of wrong rating (6V) or faulty or heavily exhausted.



Specifications

AC Input Voltage 180-260V, 50Hz~	
AC Input Current at full load at 230Vac	
Output (Charge) Voltage Selections (2 Battery Type)	
Sealed Battery - Absorption (13.8V to 14.1V); Float (13.2V to 13.5V)	Yes
Wet Battery - Absorption (14.1V to 14.4V); Float (13.4V to 13.7V)	Yes
Maximum Output Charging Current (Continuous)	5A
Line Regulation (180V to 260V) for Charging Current	0.6%
Ripple and Noise (Peak to Peak)	120mV
Efficiency at Maximum Power	84%
Protection	
Short Circuit Protected	Yes
Overload Protection	Yes
Reverse Polarity Protection	Yes
Over Temperature Protection	Yes
OVP (Output Over Voltage Protected)	Yes
Battery Under Voltage Protection, when battery voltage < 7.5V, charger will stop charging battery	Yes
CE Approvals and Standard	EN 60335, EN 55014
Charge Indication	1 LED, Red : Charging, Green : Full or Float
Anodized Aluminum Casing	Yes
Size in mm (Width x Height x Depth)	142 x 75 x 32mm
Weight in gm	380g
Included Accessories (Cable, Mounting Clips)	Yes
Recommended Battery Capacity Range	20AH to 50AH
Remark	110VAC 60Hz~ Input on Request

All values are based on the Standard ambient Temperature 25°C and Pressure 0.1Mpa.

* SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE *

3 Stage Lead-Acid Battery Charger with Charger / Power Supply Mode

SBC - 2110(10A) / 2115(15A) / 2120(20A) 12VDC Series

Description

This series of switching mode 3 stage (IUoU) chargers is designed for wet, sealed (RVLA), calcium-calcium, gel in both SLI (car) and deep cycle type of lead acid batteries.

It has 3 selections of bulk (with absorption) charge and 3 float charge voltage making a total of 9 combinations of charging profile. This is to ensure a safe, fast and complete charge as required by different types of lead acid batteries and applications.

It also has a soft start bulk charge at about 50% of full rated current when battery has been depleted to less than 10.5V open circuit voltage to give a gentle initial charge for deeply exhausted batteries.

The unique selectable Power Supply - Charger Mode provides a nominal 12V DC source (per chosen float voltage) for external load and at the same time not to over charge the battery but keeping the battery fully charged. It is ideal for caravan & other battery back up applications.

With the optional temperature sensor, the charger operates accurately over a wide range of ambient temperature preventing over or under charging the battery.

The 15A and 20A Model SBC-2115/2120 have thermostatically control fan cool., they also have dual output banks for charging two batteries simultaneously.

The streamline, low profile anodized aluminum casing, efficient switching mode circuit design and variable speed fan make it a super quiet and cool running charger and power supply.

In addition to the standard short circuit, over temperature, reverse polarity protections, it has an OVP (output over-voltage protection) to ensure complete protection of your battery and connected load.

Features

- ** 3 Stage (IUoU) Switching Mode Lead Acid Battery Charger**
- ** 3 Selectable Bulk Absorption Charge Settings**
For Gel, Wet and Calcium-Calcium lead acid battery.
- ** 3 Selectable and independent Float Voltage Settings**
A total of 9 combinations of adaptive 3 Stage Charging profiles for all types of VRLA (sealed) and Wet lead acid, SLI (car) and Deep Cycled lead acid battery.
- ** Battery can be connected to charger indefinitely.**
- ** Automatic Soft Start Bulk Charge for deeply exhausted battery**
To ensure safe and gentle charging of heavily depleted deep cycle battery and car battery.
- ** Temperature Compensation (with optional remote sensor)**
To prevent over-charging or under-charging battery at high / low ambient temperature
- ** LED indicators for Bulk, Absorption, Float, Fault and Power-On.**
- ** Dual Banks for simultaneous charging of two batteries.**
Two positive charging outputs. Not for 10Amp model.
- ** Power On Off Switch**
This is handy especially in the Power Supply - Charger Mode.
- ** Power Supply - Charger Mode**
When switched to the Power Supply - Charger Mode, it can be used as constant voltage power supply (according to the selected Float voltage: 13.2/13.5/13.8V) or as a charger / power supply when connected to a battery and external load in parallel.
- ** Silent fan cool operation**
The thermostatic control variable speed (zero to full speed) does not move at Float Charge or when ambient temperature is lower than 40°C
- ** Protections to the charger**
Short Circuit, Over Load, Over Temperature, Reversed Polarity(fused).
- ** Protection to the battery and load**
The OVP protects the load and battery from excessive over-voltage at the charger output.
- ** Wide Input Tolerance for fluctuating mains voltage**
It operates well from 180V to 260V.



All values are based on the Standard ambient Temperature 25°C and Pressure 0.1Mpa.

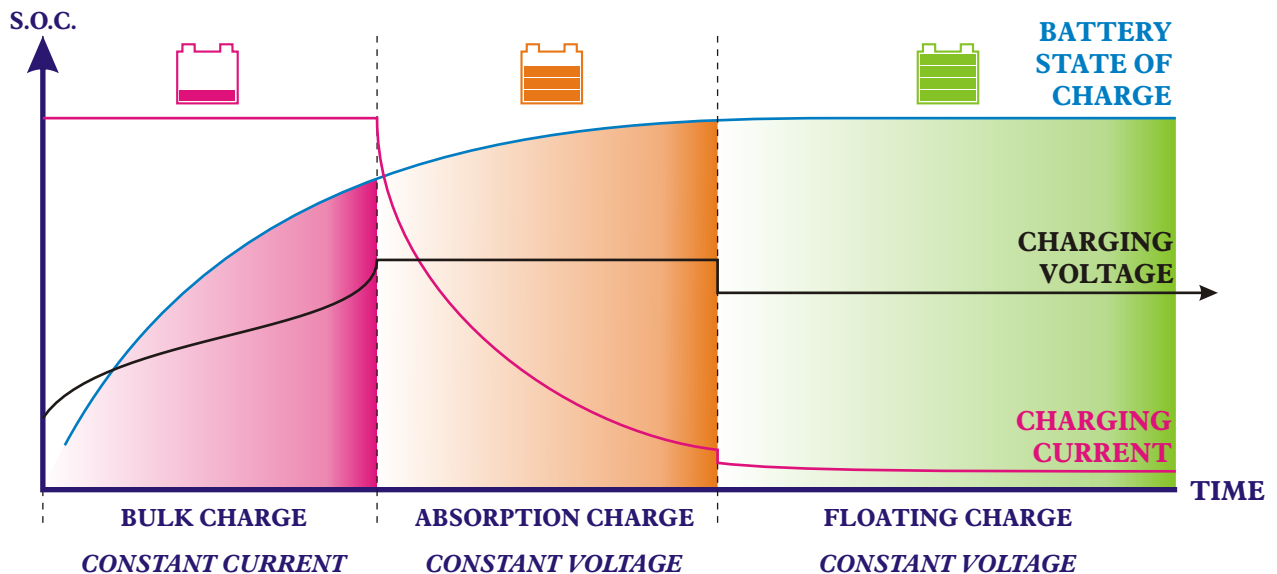
* SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE *

SBC - 2110(10A) / 2115(15A) / 2120(20A) 12VDC Series

Specifications

	<i>SBC - 2110</i>	<i>SBC - 2115</i>	<i>SBC - 2120</i>
AC Input Voltage 180-260V, 50Hz~	Yes	Yes	Yes
AC Input Current at full load at 230Vac	1.2A	1.8A	3A
Output (Charge) Voltage Selections :			
Absorption Voltage for AGM/GEL battery (14.1V to 14.3V)	Yes	Yes	Yes
Absorption Voltage for WET battery (14.6V to 14.8V)	Yes	Yes	Yes
Absorption Voltage for Calcium-Calcium battery (16.2V to 16.4V)	Yes	Yes	Yes
Float Voltage 1 (13.2V)	Yes	Yes	Yes
Float Voltage 1 (13.5V)	Yes	Yes	Yes
Float Voltage 1 (13.8V)	Yes	Yes	Yes
Maximum Output Charging Current (Continuous)	10A	15A	20A
Soft Start Bulk Charge :			
Battery Voltage to Trigger (cut-in) Soft Start Bulk Charge Mode	<9V	<9V	<9V
Soft Start Bulk Charge Current Level (Current Limit)	5A	7.5A	10A
Line Regulation (180V to 260V) for Charging Current	<0.6%	<0.6%	<0.6%
Ripple and Noise (Peak to Peak)	100mV	100mV	150mV
Efficiency at Maximum Power	90%	87%	82%
Selectable Charger / Power Supply Mode (13.2 / 13.5 / 13.8V)	Yes	Yes	Yes
Dual Banks (Outputs) Simultaneously Charging two Batteries (The two batteries must be of same chemistry, construction & type.)	No	Yes	Yes
Protection :			
Overload Protection	Yes	Yes	Yes
Short Circuit Protection	Yes	Yes	Yes
Reverse Polarity Protection (Fused)	Yes	Yes	Yes
Over Temperature Protection	Yes	Yes	Yes
OVP (Output Over Voltage Protected)	Yes	Yes	Yes
Thermostatically Controlled Variable Speed Fan (0 to full speed)	Convection Cool	Yes	Yes
CE Approvals and Standard (EN 55014 , EN 60335)	Yes	Yes	Yes
Charge Cycle, Protection Indication :			
Separate LED for Bulk, Absorption, Float and Fault Mode	Yes	Yes	Yes
Power ON-OFF LED Indicator	Yes	Yes	Yes
Power ON-OFF Switch	Yes	Yes	Yes
Temperature Sensor Socket	Yes	Yes	Yes
Anodized Aluminum Casing with Mounting Flange	Yes	Yes	Yes
Size in mm (Width x Height x Depth)	160 x 61 x 173mm	160 x 61 x 173mm	160 x 61 x 207mm
Weight in Kg	1.3kg	1.4kg	1.6kg
Included Accessories (Cable, Spare Fuse)	Yes	Yes	Yes
Optional Accessories (Remote Temperature Sensor)	Not Included	Not Included	Not Included
Recommended Battery Capacity Range	40AH to 100AH	60AH to 150AH	80AH to 200AH
Remarks	110VAC 60Hz~ Input on Request		

3 - STAGE CHARGING DIAGRAM



3 Stage Lead-Acid Battery Charger with Charger / Power Supply Mode

SBC - 2205(5A) / 2207(7.5A) / 2210(10A) 24VDC Series

Description

This series of switching mode 3 stage (IUoU) chargers is designed for wet, sealed (RVLA), calcium-calcium, gel in both SLI (car) and deep cycle type of lead acid batteries.

It has 3 selections of bulk (with absorption) charge and 3 float charge voltage making a total of 9 combinations of charging profile. This is to ensure a safe, fast and complete charge as required by different types of lead acid batteries and applications.

It also has a soft start bulk charge at about 50% of full rated current when battery has been depleted to less than 20.5V open circuit voltage to give a gentle initial charge for deeply exhausted batteries.

The unique selectable Power Supply - Charger Mode provides a nominal 24V DC source (per chosen float voltage) for external load and at the same time not to over charge the battery but keeping the battery fully charged. It is ideal for caravan & other battery back up applications.

With the optional temperature sensor, the charger operates accurately over a wide range of ambient temperature preventing over or under charging the battery.

The 7.5A and 10A Model SBC-2207/2210 have thermostatically control fan cool, they also have dual output banks for charging two batteries simultaneously.

The streamline, low profile anodized aluminum casing, efficient switching mode circuit design and variable speed fan make it a super quiet and cool running charger and power supply.

In addition to the standard short circuit, over temperature, reverse polarity protections, it has an OVP (output over-voltage protection) to ensure complete protection of your battery and connected load.

Features

- ** 3 Stage (IUoU) Switching Mode Lead Acid Battery Charger**
- ** 3 Selectable Bulk Absorption Charge Settings**
For Gel, Wet and Calcium-Calcium lead acid battery.
- ** 3 Selectable and independent Float Voltage Settings**
A total of 9 combinations of adaptive 3 Stage Charging profiles for all types of VRLA (sealed) and Wet lead acid, SLI (car) and Deep Cycled lead acid battery.
- ** Battery can be connected to charger indefinitely.**
- ** Automatic Soft Start Bulk Charge for deeply exhausted battery**
To ensure safe and gentle charging of heavily depleted deep cycle battery and car battery.
- ** Temperature Compensation (with optional remote sensor)**
To prevent over-charging or under-charging battery at high / low ambient temperature
- ** LED indicators for Bulk, Absorption, Float, Fault and Power-On.**
- ** Dual Banks for simultaneous charging of two batteries.**
Two positive charging outputs. Not for 5Amp model.
- ** Power On Off Switch**
This is handy especially in the Power Supply - Charger Mode.
- ** Power Supply - Charger Mode**
When switched to the Power Supply - Charger Mode, it can be used as constant voltage power supply (according to the selected Float voltage: 26.4/27.0/27.6V) or as a charger / power supply when connected to a battery and external load in parallel.
- ** Silent fan cool operation**
The thermostatic control variable speed (zero to full speed) does not move at Float Charge or when ambient temperature is lower than 40°C
- ** Protections to the charger**
Short Circuit, Over Load, Over Temperature, Reversed Polarity(fused).
- ** Protection to the battery and load**
The OVP protects the load and battery from excessive over-voltage at the charger output.
- ** Wide Input Tolerance for fluctuating mains voltage**
It operates well from 180V to 260V.



All values are based on the Standard ambient Temperature 25°C and Pressure 0.1Mpa.

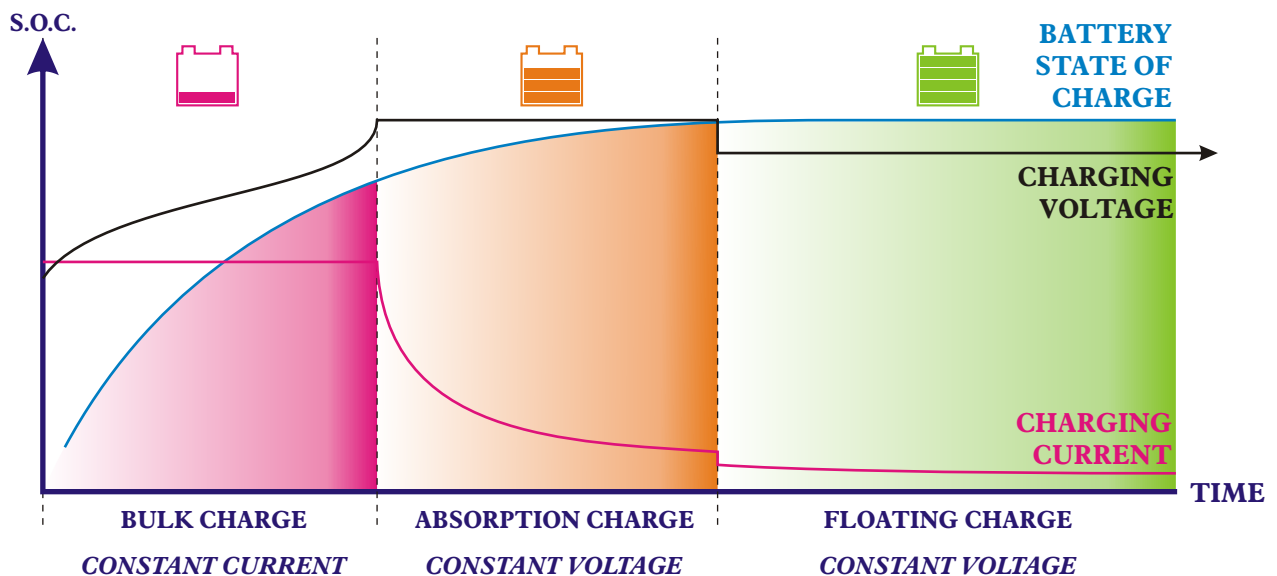
* SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE *

SBC - 2205(5A) / 2207(7.5A) / 2210(10A) 24VDC Series

Specifications

	SBC - 2205	SBC - 2207	SBC - 2210
AC Input Voltage 180-260V, 50Hz~	Yes	Yes	Yes
AC Input Current at full load at 230Vac	1.2A	1.8A	3A
Output (Charge) Voltage Selections :			
Absorption Voltage for AGM/GEL battery (28.2V to 28.6V)	Yes	Yes	Yes
Absorption Voltage for WET battery (29.2V to 29.6V)	Yes	Yes	Yes
Absorption Voltage for Calcium-Calcium battery (32.4V to 32.7V)	Yes	Yes	Yes
Float Voltage 1 (26.4V)	Yes	Yes	Yes
Float Voltage 1 (27.0V)	Yes	Yes	Yes
Float Voltage 1 (27.6V)	Yes	Yes	Yes
Maximum Output Charging Current (Continuous)	5A	7.5A	10A
Soft Start Bulk Charge :			
Battery Voltage to Trigger (cut-in) Soft Start Bulk Charge Mode	<20.5V	<20.5V	<20.5V
Soft Start Bulk Charge Current Level (Current Limit)	2.5A	3.8A	5A
Line Regulation (180V to 260V) for Charging Current	<0.6%	<0.6%	<0.6%
Ripple and Noise (Peak to Peak)	100mV	100mV	150mV
Efficiency at Maximum Power	90%	87%	82%
Selectable Charger / Power Supply Mode (26.4 / 27.0 / 27.6V)	Yes	Yes	Yes
Dual Banks (Outputs) Simultaneously Charging two Batteries (The two batteries must be of same chemistry, construction & type.)	No	Yes	Yes
Protection :			
Overload Protection	Yes	Yes	Yes
Short Circuit Protection	Yes	Yes	Yes
Reverse Polarity Protection (Fused)	Yes	Yes	Yes
Over Temperature Protection	Yes	Yes	Yes
OVP (Output Over Voltage Protected)	Yes	Yes	Yes
Thermostatically Controlled Variable Speed Fan (0 to full speed)	Convection Cool	Yes	Yes
CE Approvals and Standard (EN 55014 , EN 60335)	Yes	Yes	Yes
Charge Cycle, Protection Indication :			
Separate LED for Bulk, Absorption, Float and Fault Mode	Yes	Yes	Yes
Power ON-OFF LED Indicator	Yes	Yes	Yes
Power ON-OFF Switch	Yes	Yes	Yes
Temperature Sensor Socket	Yes	Yes	Yes
Anodized Aluminum Casing with Mounting Flange	Yes	Yes	Yes
Size in mm (Width x Height x Depth)	160 x 61 x 173mm	160 x 61 x 173mm	160 x 61 x 207mm
Weight in Kg	1.3kg	1.4kg	1.6kg
Included Accessories (Cable, Spare Fuse)	Yes	Yes	Yes
Optional Accessories (Remote Temperature Sensor)	Not Included	Not Included	Not Included
Recommended Battery Capacity Range	20AH to 50AH	30AH to 80AH	40AH to 100AH
Remarks	110VAC 60Hz~ Input on Request		

3 - STAGE CHARGING DIAGRAM



13.8VDC DC-DC Regulated Power Converter

DD - 105 / 107 (Linear mode)

Description

This series of low ripple and noise DC-DC converter are ideal for powering automotive and marine equipment which demands clean and stable regulated DC source.

Features

- 22 - 28V DC input voltage
- 13.8V DC regulated output voltage
- Low ripple and noise
- Overload protection
- Over current protection
- Fused
- ON - OFF power switch
- LED power on indicator
- Comes with mounting brackets for either on-dash or under-dash installation



Specifications

	<i>DD - 105</i>	<i>DD - 107</i>
Output Voltage	13.8VDC	
Continuous Output Current	5A	7A
Maximum Output Current	5.5A	8A
Ripple & Noise (r.m.s.)	3mVrms	
Load Regulation	0.2V	
Line Regulation	0.5V	
Input Voltage	22 - 28VDC	
Efficiency	Approx. 57.5%	
Protection Devices	Over Voltage, Over Current	
Indicators	LED Power	
Output Connection Type	Cable	
Approvals	CE EMC : EN 55014	
Dimensions (WxHxD)	125 x 47 x 110 mm 4.9 x 1.9 x 4.3 in.	125 x 47 x 130 mm 4.9 x 1.9 x 5.1 in.
Weight	0.6kgs (1.3lbs)	0.65kgs (1.4lbs)

All values are based on the Standard ambient Temperature 25°C and Pressure 0.1Mpa.

* SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE *

Description

This series of Switching mode DC-DC converters are built to meet the high current applications at 13.8VDC. In addition to the high efficiency, the low profile construction makes use of the heat sinks as main body of the robust, rugged housing of the unit. The OVP (Over voltage protection) protects sensitive electronic equipment.



Features

- 13.8V DC regulated output voltage
- 22 - 30V DC input voltage
- High efficiency 88%
- High power density
- Output over voltage protection
- Overload and short circuit protection
- LED power on indicator
- EMC INTERFERENCE IMMUNITY
- Power on-off switch

Specifications

	<i>SDC - 210</i>	<i>SDC - 225</i>	<i>SDC - 245</i>
Input Voltage Range	22 to 30VDC		
Output Voltage	13.8VDC		
Continuous Output Current	8A	20A	40A
Maximum Output Current	10A	25A	45A
Ripple & Noise (Peak-Peak)	<200mVp-p		
Load Regulation	500mV	50mV	80mV
Line Regulation	20mV		
Efficiency	88%	89%	88%
Input Connection Type	Cable		
Output Connection Type	Cable	Terminal	Terminal
Indicators	Power on LED		
Cooling System	Natural Convection	Natural Convection	Variable speed thermally control fan
Protection Devices	Overload, Short Circuit		
Input Fuse Type	Standard Car Blade Fuse		
CE Approvals	EN 55014 , EN 55022		
e-Mark Approvals	e11 02 1522	e11 02 1524	e11 02 1521
Dimensions (WxHxD)	125 x 47 x 120mm 4.9 x 1.9 x 4.7in.	156 x 57 x 168mm 6.1 x 2.2 x 6.6in.	156 x 57 x 240mm 6.1 x 2.2 x 9.5in.
Weight	0.55kgs (19.4oz.)	1.4kgs (49.3oz.)	2.2kgs (77.4oz.)
Accessory	Nil	Mounting Bracket	Mounting Bracket



SDC - 310

Description

This series of DC-DC Switching Mode Converters are built to meet the high current applications at 28V DC. In addition to the high efficiency, the low profile construction makes use of the heat sinks as main body of the robust, rugged housing of the unit. The OVP (Over Voltage Protection) protects sensitive electronic equipment.

Features

- High efficiency 88%
- High power density
- Output over voltage protection
- Short circuit and overload protection
- LED power on indicator
- EMC INTERFERENCE IMMUNITY
- Power ON - OFF Switch



Specifications

	SDC - 310
Input Voltage Range	10 - 15VDC
Output Voltage	28VDC
Continuous Output Current	8A
Maximum Output Current	10A
Ripple & Noise (Peak-Peak)	<100mVp-p
Load Regulation	300mV
Line Regulation	150mV
Output Voltage Protection	Over Voltage Protection
Efficiency	88%
Protection Devices	Output Overload, Short Circuit Protection
Indicators	Power on LED
Input Connection Type	Cable
Output Connection Type	One set banana screw on type and one set philips screw type
Cooling System	Natural Convection
Input Fuse Type	Standard Car Blade Fuse
CE Approvals	EN 55014 , EN 55022
e-Mark Approvals	e11 02 2981
Dimensions (WxHxD)	156 x 57 x 130mm (6.1 x 2.2 x 5.1in.)
Weight	1kgs (35oz.)
Accessory	Mounting Bracket

Description

This new generation of SDC- 5200 series of voltage reducers offer regulated 13.8 V DC power from 20-30VDC source such as Land Rovers , commercial vehicles, recreation vehicles, farming equipment and other diesel power vehicles.

The very compact, lightweight and no vent hole casing construction is possible because of the highly efficient, switch mode design with surface mount devices.

Low heat output and low standby current take out the need for an external power on-off switch.

The plastic clip-on mounting system makes the installation easy even in awkward to reach spot. The unit is tamper and dust proof because of no vent holes and no external fuse construction. The PCB component layout is designed and built for vibration loosening resistant, and with moisture proof coating making it ideal for off-road and harsh environments.

The advanced switching mode circuit design results a cool, silent, no humming and no high frequency noise operation. Electronic safeguards and fail-safe feature such as OVP ensure good protection to expensive connected equipments even when there is a fault in the unit.

The 13.8VDC output can be used as a source for float charge for 12V auxiliary battery.

Typical applications for this new generation of DC-DC converters are:

Radio communications, car entertainment such as DVD player, printers, on board computers, security system, GPS, auxiliary lights, spot lights, charging of 12V auxiliary battery, and etc.

Features

- Slim, compact and light construction due to high efficiency & low heat output.
- Dust and tamper proof due to extruded aluminum casing of no vent hole & no external fuse.
- Reliable clip-on mounting bracket construction for easy installation even in hard to get to spot.
- Vibration loosening resistant & coated PCB assembly, ideal for off road vehicles environment.
- Advanced switching mode design & SMT components for high efficiency & cool operation.
- Low standby current takes out the need for an external on-off switch.
- Over Voltage Protection against excessive output voltage in case of wrong installation or fault.
- Auto-reset loss of earth protection.
- Auto-reset over power protection.
- Auto-reset reverse polarity protection.
- Separate LED indicator for operation and fault status.
- Meet e-Mark and CE standards.

Specifications

	SDC - 5205	SDC - 5208	SDC - 5212	SDC - 5220
Input Voltage Range	18V to 38VDC			
Output Voltage	13.8VDC			
Continuous Output Current	5A	7A	12A	16A
Maximum Output Current at 30% Duty Cycle	7A	12A	16A	20A
No Load Current	<20mA	<30mA	<50mA	<100mA
Ripple & Noise (Peak-Peak)	100mVp-p			
Ripple & Noise (r.m.s.)	10mVrms	10mVrms	15mVrms	20mVrms
Load Regulation	80mV			
Line Regulation	50mV			
Efficiency	>89%	>90%	>90%	>90%
Protections	OVP (Output Over-Voltage Protection), Loss of Earth Protection Self Reset Protections : a) Reverse Polarity Protection ; b) Overload Protection ; c) Short Circuit Protection Green LED - Operate & Red LED - Fault			
Indicators	Push-on Flat Blade Connectors			
Input & Output Connection Type	Natural Convection			
Cooling System	-10°C - 50°C			
Max. Operating Temperature				
Internal Input Fuse (glass type)	8A	10A	20A	25A
e-Mark Approval No.	e11*72/245*95/54*3079*00			
Dimensions (WxHxD) mm	77 x 75 x 32	96 x 75 x 32	142 x 75 x 32	192 x 75 x 32
	3 x 3 x 1.3	3.8 x 3 x 1.3	5.6 x 3 x 1.3	7.6 x 3 x 1.3
Weight	190g (6.7oz.)	230g (8oz.)	380g (13.4oz.)	480g (16.9oz.)
Accessory	Clip-on Mounting Bracket set and Screws, Slip-on Receptacles			

All values are based on the Standard ambient Temperature 25°C and Pressure 0.1Mpa.

* SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE *



e-Mark

Regulated Constant Voltage DC - DC Converter

SDC-8170 (Input 10~16V, Output 13.5V 4.5A cont, 6A max 30min.)
SDC-8270 (Input 20~35V, Output 27V 3A cont, 4A max 30min.)

Description

This series of DC-DC converters is designed to provide a regulated fixed output voltage from un-regulated, fluctuating DC input source.

It provides instantaneous step up and step down voltage conversion to keep the output at a stable, constant output voltage.

With the ever increasing of on- vehicle / boat and on board electronic devices, the supply DC voltage from the battery / alternator system fluctuates with the changing power supply and demand situation.

Many expensive electronic devices such as TFT screens, audio and video equipments, precision instruments have a narrow operating input DC voltage for optimal performance.

This series of regulated, constant voltage DC-DC converters offers a cost effective solution to ensure the optimal performance of your expensive electronic device in a fluctuating DC environment.

The high efficiency advanced switching mode circuit design makes convection cooling possible in a compact aluminum extruded casing.

The totally enclosed plastic end caps and sealed construction make this robust converter moisture, and dust proof. It can withstand the harsh and humid working environment. The plastic clip-on mounting system makes the installation easy even in a hard to reach tight spot.

Features

- ** Step up and Step down voltage conversion
- ** Regulated stable output voltage
- ** Slim, compact, light aluminum casing
- ** Dust and moisture proof construction
- ** High efficiency switching mode design
- ** Excellent line and load regulation
- ** Low Ripple and Noise
- ** Input under & over voltage protection
- ** Short circuit and over load protection
- ** Over temperature protection
- ** Reverse polarity protection
- ** Loss of earth protection
- ** LED indicators of operation and fault status
- ** Meet E-Mark (CE) standards



Specifications

Operation Input Voltage Range

Output Voltage

Rated Output Current (Continuous)

Maximum Output Current (30 minutes)

Load Voltage Regulation (0-100%)

Line Voltage Regulation (O/P: 13.5V ; I/P: 10.5-16V)

Ripple and Noise (Peak to Peak)

No Load Current

Efficiency (Input: 13.8V, Output: 13.5V / 4.5A)

Protection :

Short Circuit Protection (self reset)

Input Low Voltage Protection (self reset)

Input High Voltage Protection (self reset)

Reverse Polarity Protection (fused)

Over Temperature Protection (self reset)

Loss of Earth Protection (self reset)

Convection Cooling

Maximum Working Ambient Temperature

Approvals and Standard

LED Indicators (Green=ON ; Red=Fault)

Size in mm (Length x Width x Height)

Weight in gram

Accessories

Remark

SBC - 8170 (13.5Vdc / 4.5A)

10Vdc to 16Vdc

13.5Vdc

4.5A

6.0A

20mV

20mV

<50mV

<150mV

87%

Yes

Yes

Yes

Yes

Yes

Yes

Yes

40°C

E-Mark (CE)

Yes

mm

g

Clip-on Mounting Bracket set and Screw,
Slip-on Cable Receptacles

SBC-8270 (27Vdc / 3A)

20Vdc to 35Vdc

27Vdc

3.0A

4.0A

20mV

50mV

<60mV

<150mV

89%

Yes

Yes

Yes

Yes

Yes

Yes

Yes

40°C

Yes

Description

This Isolated Ground series provide negative / positive ground reference compatibility, allowing connection of negative ground equipment to positive or floating ground battery system or vice versa. They offer protection level for themselves and to the connected loads. They also offer protection against transient voltages spikes typically encountered on electric fork lifts. Being switch mode, they have high efficiency (>80%), produces little heat and are of small size for the power they deliver.

Features

- Negative or positive ground reference
- High efficiency 88%
- Low profile , high power density
- Protection against transient voltages
- EMC INTERFERENCE IMMUNITY
- 22 - 30VDC input voltage
- Overload and short circuit protection
- Over current protection
- LED power on indicator



Specifications

	SSDC - 210	SSDC - 225
Input Voltage Range	22 to 30VDC	
Output Voltage	13.8VDC	
Continuous Output Current	8A	35A
Maximum Output Current	10A	40A
Ripple & Noise (Peak-Peak)	<100mVp-p	
Load Regulation	350mV	250mV
Line Regulation	20mV	50mV
Efficiency	>86%	>80%
Input Connection Type	Cable	
Output Connection Type	Cable	Terminal
Indicators	Power on LED	
Cooling System	Natural Convection	Variable speed thermally control fan
Protection Devices	Over Voltage, Overload, Short Circuit	
CE Approvals	EN 55011 , EN 55022	EN 55022
e-Mark Approvals	e11 02 1520	Nil
Dimensions (WxHxD)	125 x 47 x 120mm 4.9 x 1.9 x 4.7inch	156 x 57 x 240mm 6.1 x 2.2 x 9.5in.
Weight	0.65kgs (1.4lbs)	2.2kgs (5bs)
Accessory	Nil	Mounting Bracket

All values are based on the Standard ambient Temperature 25°C and Pressure 0.1Mpa.

* SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE *

MEM - 1115

Description

This Solar Compo Inverter series have inverter and PV charge controller in one unit.

With the benefits of fewer components and wiring connections the compo unit is cost effective and reliable .

The self contained unit is user friendly with easy hook up connection to the PV panel and battery.

There are 3 separate LED indicators to show the battery's state of charge: Low, Medium, High; one LED to show operation of the Solar charge controller and a bi-color LED for the operation status of the modified sine wave inverter.

The built in PV charge controller utilizes PWM charging technology to ensure fast and efficient charging and effective protection against over-charging the battery. Reverse Polarity Protection for PV terminal is an added protection for the costly PV panel.

The efficient inverter has 300W surge capability for powering up difficult loads with high start up current, protections such as short circuit, overload, over-temperature, and low battery cut-off are standard. Power on-off switch allows for better conservation of battery's power. The anodized aluminum casing ensures efficient cooling and better corrosion resistant.

Specifications

PV Module Input (Charge Controller)

Continuous Charging Current
Max. Charging Current for 5 minutes
Battery System
Maximum PV Panel Open Circuit Voltage
PV Module Operation Indication
Electronic Blocking Protection
Reverse Polarity Protection
Transient Voltage Protection

Battery Connections

Battery Overcharge Protection
PWM Set-point
Battery Reverse Polarity Protection
Battery Level Indication
Battery Over-Discharge Protection

230VAC Output (Inverter)

Rated Output Voltage
Rated Output Power
Maximum Surge Power
Waveform
Efficiency
Cooling Method
Inverter Operation Indication
Inverter On/Off Control
Protections
Fuses
Operating Temperature
Construction

Dimensions (WxHxD)

Weight

MEM - 1115

8Amp
10Amp
Battery Voltage : 12VDC ; Battery Type : Sealed (Factory Preset) or Wet
26VDC
LED to Show PV in Operation
Block Feedback Current to PV from Battery
To Prevent PV Module and Battery accidental reverse
Yes

Yes by Pulse Width Modulation
Sealed - 14.3VDC (Factory Preset) , Wet - 14.8VDC
Yes by Car blade fuse & diode
3 LED : High , Medium , Low
Yes Inverter be shut down at 10.5VDC

230VAC , 50Hz~
Continuous 150Watts
300Watts
Modified Sine Wave
>80% @ Rate Power pf=1
Natural Cooling
Bi-Color LED Showing On (Green) or Shut Down (Red)
Power On/Off Switch
Short Circuit, Overload, Over Temperature
Recoverable AC Fuse & Car Blade DC Fuse
-5 to +50°C
Anodized aluminum casing with mounting brackets,
PCB with conformal coating
Approx. 220 x 93 x 70mm (8.7 x 3.7 x 2.8in.)
Approx. 850g (30oz.)

Features

- Compact, cost effective user friendly simple hook up
- Reverse polarity protection for Solar modules and inverter
- 3 separate LED Battery Level indicators.
- Low battery, short circuit, overload and over temperature protections.
- Recoverable AC Fuse
- Car Blade DC fuse



RoHS
COMPLIANT
2002/95/EC

Works without risk of Lithium Ion Battery
*Power Your Notebook with or **WITHOUT** the Lithium Ion Battery*
Slim , Light , Compact
Comes with Airline-Car Power Adapter Plugs
Designed for use with Notebook and Digital Portables
Enhanced Protection Circuits



Applications

*Suitable for all major brand
Notebook computers ,
digital portable like video camcorder ,
digital camera ,
DVD player and etc.*



Features & Benefits

Plugs directly into airline's in-seat power receptacle (1st class and B class)

Plugs directly into your car's cigarette lighter

Automatic Shutdown prevents your car's battery from excessive draining

Dual Status LED indicator , Green for in operation , Red for shutdown

Enhanced Protection Circuit

Output Short Circuit Protection

High Temperature (thermal) shutdown

Overload shutdown

Over voltage shutdown

Undervoltage shutdown

Each of the above is a **MUST** for the safety of the user and protection of you notebook and its power input source

Specifications

Input Voltage Range : 11 ~ 15VDC

Output Rated Power : 75W Continuous , 90W Maximum

Output Voltage & Frequency : 230VAC 50Hz / 120VAC 60Hz On Request

Indicator : Dual color LED (Green~operation , Red~shutdown)

Protections : Short Circuit , Overload , Low Battery Voltage , Over Battery Voltage

Approvals : E Mark (e11 02 1625), FCC PART15 Class B

Dimension (LxWxH) : 114 x 76 x 36 mm (4.5 x 3 x 1.4 in.)

Total Weight : 310g (11oz.)

Pure Sine Wave 500W 12/24VDC Double Insulated Power Inverter

ME - 4105 / 4205

Description

These series of pure sine wave inverter is designed and manufactured with double insulation safety standard as required by the latest CE directives.

The informative 5 stage and 3 color LED indicator for load level and the battery state will tell the user :

- how much spare capacity left in the inverter
- is the wiring connection to battery in good order and properly sized
- the loading condition during start up and continuous running of the load
- the state of charge of battery (how much juice left) during use .

and more

Diagnosis with the fault light, the load and battery indicators , you can ensure proper use of the inverter with appropriate load and right size battery for your application .

No more surprises , No more let down at the most critical moment to find out that your battery can no longer power your inverter and appliance.

Features

- Double Insulation Safety Standard
- 5 level 3 color LED indicator for Battery State
- 5 level 3 color LED indicator for Load condition
- Manual select Standby mode for energy saving
- Comprehensive built in protections



Specifications

	MEM - 4105	MEM - 4205
Input Voltage	10 - 16VDC	20 - 32VDC
Output Voltage	230V AC / 50Hz~	
Output Voltage Frequency	50Hz~	
Rated Output Power	500W	
Maximum Surge Power	650W	
Output Waveform	Pure Sine Wave	
Total Harmonic Distortion	<3%	
Efficiency	>80%	
No Load Input Current (Standby On)	<0.6A	<0.3A
No Load Input Current (Standby Off)	<1A	<0.6A
Full Load Input Current	52A	24.8A
Inverter Operation Indication	Battery 5 Levels & 3 Color LED Indication, Load 5 Levels & 3 Color LED Indication, Fault Red LED Indication	
Inverter ON/OFF Control	Power ON/OFF Switch at Front, Standby ON/OFF Switch at Rear	
Cooling Method	Thermostatic Control Fan	
Protections	Input Under & Over Voltage Protection, Overload Protection, Output Short Circuit Protection, Over Temperature Protection	
Approvals	CE EMC : EN 55022 , LVD : EN 61558	
Fuse	3 Internal Fuse each of 25A / 230V Glass Fuse	
Operating Temperature	0 - 40°C	
Dimensions (WxHxD)	250 x 140 x 102mm (9.8 x 5.5 x 4inch)	
Weight	3kgs (6.6lbs)	

All values are based on the Standard ambient Temperature 25°C and Pressure 0.1Mpa.

* SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE *

Description

This series of low powered and cost effective PV Charge Controller is designed for trouble free application in remote high humid environment .

The whole unit is potted in Epoxy Resin . It is suitable for seal or wet type lead acid battery and all types of PV modules. The full solid state electronic components using 0 to 100% Pulse Width Modulation charging and power switching by MOSFET assures optimal utilization of sunlight and safe charging of battery .

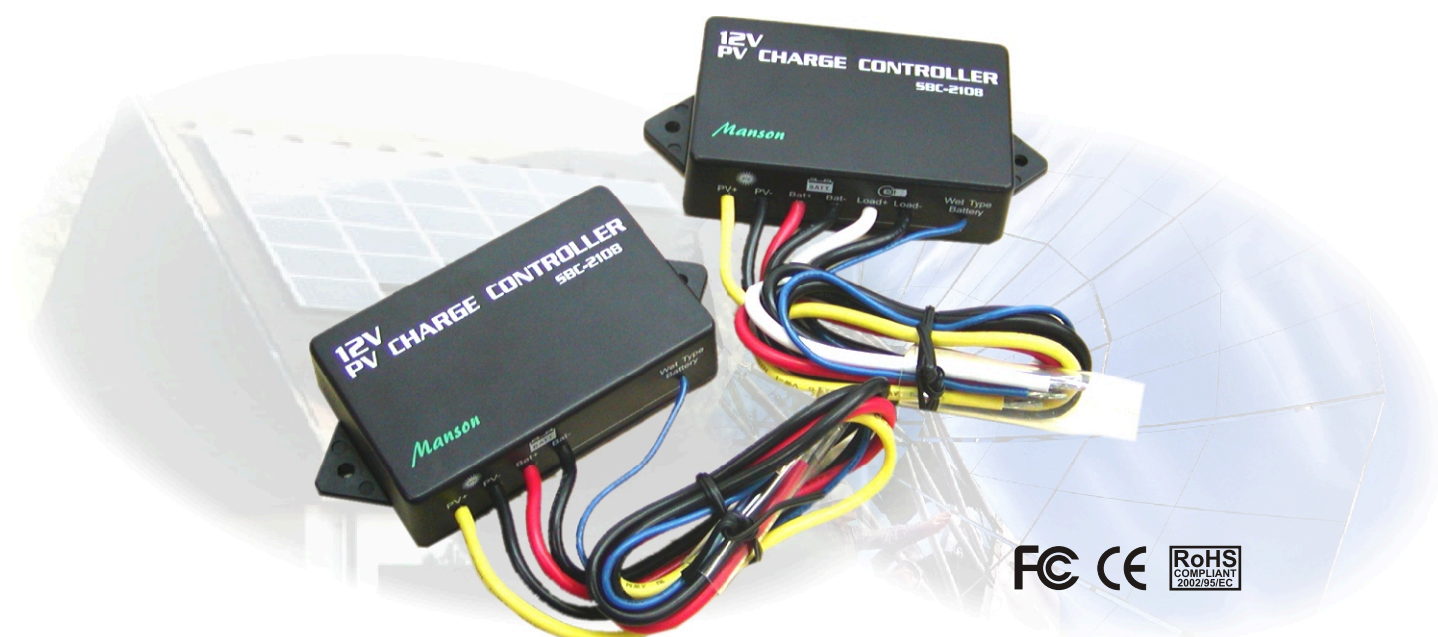
Selection for charging sealed or wet type of battery is made possible by shorting of terminal wire. The SBC-2106L is made with Night Light Load DC output .

Features

- Compact size
- Water resistant
- Simple to use
- Electronic Blocking of reverse current to PV module
- Sealed and Wet type battery connection.
- Night Light Mode DC output for L version

Specifications

Model	SBC-2106	SBC-2106L
Battery System Voltage	12VDC	
Max. PV Open Circuit Voltage	26VDC	
Max. PV Short Circuit Current	6A	
PWM Setpoint	Sealed Type Battery Setting : $14.3V \pm 0.1V$ Wet Type Battery Setting : $14.8V \pm 0.1V$	
Min. Operating Voltage	3VDC	
Rated Charging Current	6A	
Max. Charging Current (5min.)	8A	
Rated Load Current	6A	
Max. Load Current (1min.)	8A	
PV Voltage While Load Turn ON	SBC-2106 does not	$\leq 3.5V$
PV Voltage While Load Turn OFF	have load terminals	$\geq 5 \pm 0.2V$
Low Battery Shutdown for Load	SBC-2106 does not	$\leq 10.5 \pm 0.2V$
Low Battery Recover for Load	have load terminals	$\geq 11.8 \pm 0.2V$
Ambient Temperature Range	-40 ~ +60°C	
Relative Humidity	100%	
Approvals	EN 55022 / EN 61001, FCC PART 15 SUBPART B CLASS B	
Dimension (LxWxH)	97 x 46 x 25.5 mm	
Weight	103g	



SBC - 6108 / 6112 / 6120

Description

The SBC-6100 Series PV charge controller is designed for use with all types of photovoltaic panels and wet or sealed lead acid batteries.

The MCU (Microprocessor controller) is programmed with 3-stage charging algorithms and with 0~100% PWM (Pulse width Modulation) duty cycles to provide the fastest, optimal charging current and voltages from PV panels according to the actual state of charge and type of battery.

The 3-stage (Bulk, Absorption, Float) and *Equalization* charging cycles ensure complete charging cycles and maintenance of lead acid battery automatically. *Equalization* Charging is only for Wet type lead acid battery, automatically cycles once a month for 2 hours.

Equalization Charging can be de-activated or re-activated manually.

Electronic Blocking of back current to PV and overcharging battery protection are standard.

Features

- Microprocessor control PWM and 3 stage charging algorithms. Bulk , Absorption & Float Charge LED indications.
- 5 State LED Indications of battery levels.
- Electronic Overcharge Protection & back current blocking to PV panel.
- Over temperature Protection of PV Charge Controller's electronic circuit.
- Dusk to Dawn automatic ON-Off with 10 selectable on-off programs.
- Optional Temperature Sensor for compensated battery charging.
- Optional Remote Signal Terminal.

Specifications

	SBC - 6108	SBC - 6112	SBC - 6120
Battery Voltage	12VDC		
Maximum PV Panel Open Circuit Voltage	26VDC		
Continuous Load / Charge Current	8A	12A	20A
Maximum Charge Current (5 min.)	10A	15A	25A
Maximum Load Current (5 min.)	10A	20A	25A
Operation Current (no load and no PV)	30mA		
Voltage Across Terminal (PV to Battery)	0.6V	0.6V	0.8V
Voltage Across Terminal (Battery to Load)	0.3V	0.3V	0.4V
Electronic Blocking	Yes		
(To protect against reverse polarity connection of PV panel and to block current from battery to PV panel when voltage of battery is higher than PV panel)			
Battery Reverse Polarity Protection	Yes		
Over Charge & Over-Discharge Protection	Yes		
Battery Status LED Indication	5 State LED Indications		
Charging Status LED Indication	3 State LED Indications		
Recommended Wire Size	#12AWG		
Dimensions (WxHxD)	150 x 85 x 45mm (5.9 x 3.3 x 1.8inch)		
Weight	440g (15.5oz.)		
Fuse	15A	20A	30A
Operating Ambient Temperature	-10 to 50°C		
Over Temperature Protection	Yes		
Battery Charging Float Voltage Setting	Factory Preset 13.4VDC		
Battery Charging Bulk Voltage Setting	Factory Preset 14.3VDC		
DC Load Control Mode (for DC load terminal):			
Low Voltage Disconnect (LVD)	Factory Preset 11.5VDC		
Low Voltage Reconnect (LVR)	Factory Preset 12.5VDC		

DC Output (for small DC load)

The DC output terminal has many value added night-light mode program , please see user manual at our website for detail description.

The DC output has dusk to dawn automatic on-off operations.

There are 10 selectable multiple on-off programs, each with different power-on durations for various needs or lighting schedules.

Optional Accessories

1. There is an optional Remote Signal Terminal which can:

A. This signal is synchronized with the DC output status. It controls the ON/OFF operation of equipment such as inverter hooked up to the battery bank to operate along with the night-light mode program and share the safeguard function such as low battery disconnect and reconnect.

B. It makes extension connection of the battery status LED to allow remote monitoring Battery bank status.

2. Temperature sensor (1.8m wire length) for correct bulk and float charging voltages according to the temperature at the battery.



Description

The SBC-6200 Series PV charge controller is designed for use with all types of photovoltaic panels and wet or sealed lead acid batteries.

The MCU (Microprocessor controller) is programmed with 3-stage charging algorithms and with 0~100% PWM (Pulse width Modulation) duty cycles to provide the fastest, optimal charging current and voltages from PV panels according to the actual state of charge and type of battery.

The 3-stage (Bulk, Absorption, Float) and *Equalization* charging cycles ensure complete charging cycles and maintenance of lead acid battery automatically. *Equalization* Charging is only for Wet type lead acid battery, automatically cycles once a month for 2 hours.

Equalization Charging can be de-activated or re-activated manually.

Electronic Blocking of back current to PV and overcharging battery protection are standard.

Features

- Microprocessor control PWM and 3 stage charging algorithms. Bulk , Absorption & Float Charge LED indications.
- 5 State LED Indications of battery levels.
- Electronic Overcharge Protection & back current blocking to PV panel.
- Over temperature Protection of PV Charge Controller's electronic circuit.
- Dusk to Dawn automatic ON-Off with 10 selectable on-off programs.
- Optional Temperature Sensor for compensated battery charging.
- Optional Remote Signal Terminal.

Specifications

	SBC - 6208	SBC - 6212	SBC - 6220
Battery Voltage	24VDC		
Maximum PV Panel Open Circuit Voltage	52VDC		
Continuous Load / Charge Current	8A	12A	20A
Maximum Charge Current (5 min.)	10A	15A	25A
Maximum Load Current (5 min.)	10A	20A	25A
Operation Current (no load and no PV)	30mA		
Voltage Across Terminal (PV to Battery)	0.8V	0.6V	0.8V
Voltage Across Terminal (Battery to Load)	0.5V	0.3V	0.4V
Electronic Blocking	Yes		
<i>(To protect against reverse polarity connection of PV panel and to block current from battery to PV panel when voltage of battery is higher than PV panel)</i>			
Battery Reverse Polarity Protection	Yes		
Over Charge & Over-Discharge Protection	Yes		
Battery Status LED Indication	5 State LED Indications		
Charging Status LED Indication	3 State LED Indications		
Recommended Wire Size	#12AWG		
Dimensions (WxHxD)	150 x 85 x 45mm (5.9 x 3.3 x 1.8inch)		
Weight	0.44kgs (0.2lbs)		
Fuse	15A	20A	30A
Operating Ambient Temperature	-10 to 50°C		
Over Temperature Protection	Yes		
Battery Charging Float Voltage Setting	Factory Preset 27.0VDC		
Battery Charging Bulk Voltage Setting	Factory Preset 28.6VDC		
DC Load Control Mode (for DC load terminal):			
Low Voltage Disconnect (LVD)	Factory Preset 23VDC		
Low Voltage Reconnect (LVR)	Factory Preset 25VDC		

DC Output (for small DC load)

The DC output terminal has many value added night-light mode program , please see user manual at our website for detail description.

The DC output has dusk to dawn automatic on-off operations.

There are 10 selectable multiple on-off programs, each with different power-on durations for various needs or lighting schedules.

Optional Accessories

1. There is an optional Remote Signal Terminal which can:

A. This signal is synchronized with the DC output status. It controls the ON/OFF operation of equipment such as inverter hooked up to the battery bank to operate along with the night-light mode program and share the safeguard function such as low battery disconnect and reconnect.

B. It makes extension connection of the battery status LED to allow remote monitoring Battery bank status.

2. Temperature sensor (1.8m wire length) for correct bulk and float charging voltages according to the temperature at the battery.



PV Charge Controller

SBC - 7108 / 7112 / 7120

Description

The SBC-7100 Series PV charge controller is designed for use with all types of photovoltaic panels and different types of batteries, such as wet or sealed lead acid, lead calcium, lead antimony battery, NiCad or NiFe alkaline battery.

The MCU (Microprocessor controller) is programmed with 3 stage charging algorithms and with 0~100% PWM (Pulse Width Modulation) duty cycles to provide the fastest, optimal charging current and voltages from PV panels according to the actual state of charge and type of battery.

The 3-stage (Bulk, Absorption, Float) and *Equalization* charging cycles ensure complete charging cycles and maintenance of lead acid battery automatically.

Bulk and Float threshold charge voltage levels are user adjustable to meet specific battery manufacturer's recommendation.

*Equalization Charging is only for Wet type lead acid Battery, automatically cycles once a month for 2 hours.

Equalization Charging can be de-activated or re-activated manually.

Hence, maximum PV charging efficiency and longer the service life span of the battery are ensured.

Ampere Hour logging read outs in three sets, today and last two days are shown on the LCD. This is useful to check the condition of PV data for efficiency and actual capacity of your system.

Electronic Blocking of back current to PV and overcharging battery protection are standard.

Optional Accessories

1. There is an optional Remote Signal Terminal which can:

A. This signal is synchronized with the DC output status. It controls the ON/OFF operation of equipment such as inverter hooked up to the battery bank to operate along with the night-light mode program and share the safeguard function such as low battery disconnect and reconnect.

B. It makes extension connection of the battery status LED to allow remote monitoring battery bank status.

2. Temperature sensor (1.8m wire length) for the compensated bulk and float charging voltages according to the temperature at the battery.

Specifications

	SBC - 7108	SBC - 7112	SBC - 7120
Battery Voltage	12VDC		
Maximum PV Panel Open Circuit Voltage	26VDC		
Continuous Load / Charge Current	8A	12A	20A
Maximum Charge Current (5 min.)	10A	15A	25A
Maximum Load Current (5 min.)	10A	20A	25A
Operation Current (no load and no PV)	30mA		
Voltage Across Terminal (PV to Battery)	0.6V	0.6V	0.8V
Voltage Across Terminal (Battery to Load)	0.3V	0.3V	0.4V
Electronic Blocking	Yes		
<i>(To protect against reverse polarity connection of PV panel and to block current from battery to PV panel when voltage of battery is higher than PV panel)</i>			
Battery Reverse Polarity Protection	Yes		
Over Charge & Over-Discharge Protection	Yes		
Battery Status LED Indication	5 State LED Indications		
Charging Status LCD Indication	3 State LCD Display (Bulk, Absorb, Float)		
Recommended Wire Size	#12AWG		
Dimensions (WxHxD)	150 x 85 x 45mm (5.9 x 3.3 x 1.8inch)		
Weight	470g (16.5oz.)		
Fuse	15A	20A	30A
Operating Ambient Temperature	-10 to 50°C		
Over Temperature Protection	Yes		
Battery Charging Float Voltage Setting	Factory Preset 12 - 15VDC		
Battery Charging Bulk Voltage Setting	Factory Preset 12 - 16VDC		
DC Load Control Mode (for DC load terminal):			
Low Voltage Disconnect (LVD)	Factory Preset 8 - 16VDC		
Low Voltage Reconnect (LVR)	Factory Preset 8 - 16VDC		

DC Output (for small DC load)

The DC output terminal has many value added night-light mode programs, please see user manual at our website for detail descriptions.

The DC output has dusk to dawn automatic on-off operations.

There are 10 selectable multiple on-off programs, each with different power-on durations for various needs or lighting schedules.

The battery low voltage level disconnect and reconnect settings are user adjustable.

Features

- User adjustable charging voltages
- Suitable for most types of heavy duty 12V battery.
- Microprocessor control PWM and 3 stage charging algorithms.
- Bulk, Absorption & Float Charge status on LCD Display.
- Ampere Hour logging read outs in 3 sets, today and last 2 days.
- 5 State LED Indications of battery levels.
- Electronic Overcharge Protection & Back Current Blocking to PV panel.
- Over Temperature Protection of PV Charge Controller's electronic circuit.
- Dusk to Dawn automatic ON-Off with 10 selectable on-off programs.
- Adjustable battery low voltage level disconnect and reconnect for DC output.
- Optional Temperature Sensor for compensated battery charging.
- Optional Remote Signal Terminal.



Description

The SBC-7200 Series PV charge controller is designed for use with all types of photovoltaic panels and different types of batteries, such as wet or sealed lead acid, lead calcium, lead antimony battery, NiCad or NiFe alkaline battery.

The MCU (Microprocessor controller) is programmed with 3 stage charging algorithms and with 0~100% PWM (Pulse Width Modulation) duty cycles to provide the fastest, optimal charging current and voltages from PV panels according to the actual state of charge and type of battery.

The 3-stage (Bulk, Absorption, Float) and *Equalization* charging cycles ensure complete charging cycles and maintenance of lead acid battery automatically.

Bulk and Float threshold charge voltage levels are user adjustable to meet specific battery manufacturer's recommendation.

*Equalization Charging is only for Wet type lead acid Battery, automatically cycles once a month for 2 hours.

Equalization Charging can be de-activated or re-activated manually.

Hence, maximum PV charging efficiency and longer the service life span of the battery are ensured.

Ampere Hour logging read outs in three sets, today and last two days are shown on the LCD. This is useful to check the condition of PV data for efficiency and actual capacity of your system.

Electronic Blocking of back current to PV and overcharging battery protection are standard.

Optional Accessories

1. There is an optional Remote Signal Terminal which can:

A. This signal is synchronized with the DC output status. It controls the ON/OFF operation of equipment such as inverter hooked up to the battery bank to operate along with the night-light mode program and share the safeguard function such as low battery disconnect and reconnect.

B. It makes extension connection of the battery status LED to allow remote monitoring battery bank status.

2. Temperature sensor (1.8m wire length) for the compensated bulk and float charging voltages according to the temperature at the battery.

Specifications

	SBC - 7208	SBC - 7212	SBC - 7220
Battery Voltage	24VDC		
Maximum PV Panel Open Circuit Voltage	52VDC		
Continuous Load / Charge Current	8A	12A	20A
Maximum Charge Current (5 min.)	10A	15A	25A
Maximum Load Current (5 min.)	10A	20A	25A
Operation Current (no load and no PV)	10mA		
Voltage Across Terminal (PV to Battery)	0.8V	0.6V	0.8V
Voltage Across Terminal (Battery to Load)	0.5V	0.3V	0.5V
Electronic Blocking	Yes		
<i>(To protect against reverse polarity connection of PV panel and to block current from battery to PV panel when voltage of battery is higher than PV panel)</i>			
Battery Reverse Polarity Protection	Yes		
Over Charge & Over-Discharge Protection	Yes		
Battery Status LED Indication	5 State LED Indications		
Charging Status LCD Indication	3 State LCD Display (Bulk, Absorb, Float)		
Recommended Wire Size	#12AWG		
Dimensions (WxHxD)	150 x 85 x 45mm (5.9 x 3.3 x 1.8inch)		
Weight	47g (0.2lbs)		
Fuse	15A	20A	30A
Operating Ambient Temperature	-10 to 50°C		
Over Temperature Protection	Yes		
Battery Charging Float Voltage Setting	Factory Preset 27VDC		
Battery Charging Bulk Voltage Setting	Factory Preset 28.6VDC		
DC Load Control Mode (for DC load terminal):			
Low Voltage Disconnect (LVD)	Factory Preset 16 - 32VDC		
Low Voltage Reconnect (LVR)	Factory Preset 16 - 32VDC		

DC Output (for small DC load)

The DC output terminal has many value added night-light mode programs, please see user manual at our website for detail descriptions.

The DC output has dusk to dawn automatic on-off operations. There are 10 selectable multiple on-off programs, each with different power-on durations for various needs or lighting schedules.

The battery low voltage level disconnect and reconnect settings are user adjustable.

Features

- User adjustable charging voltages
- Suitable for most types of heavy duty 24V battery.
- Microprocessor control PWM and 3 stage charging algorithms.
- Bulk, Absorption & Float Charge status on LCD Display.
- Ampere Hour logging read outs in 3 sets, today and last 2 days.
- 5 State LED Indications of battery levels.
- Electronic Overcharge Protection & Back Current Blocking to PV panel.
- Over Temperature Protection of PV Charge Controller's electronic circuit.
- Dusk to Dawn automatic ON-Off with 10 selectable on-off programs.
- Adjustable battery low voltage level disconnect and reconnect for DC output.
- Optional Temperature Sensor for compensated battery charging.
- Optional Remote Signal Terminal.



SDC - 2010

ANOTHER ENERGY CONSERVATION PRODUCT

• WASTE LESS BATTERY • HELP TO SAVE THE EARTH AND YOUR MONEY •

Description

A high tech efficient car power adapter built to provide stable clean DC power for the voltage sensitive electronic digital equipment with minimal strain on the car's electrical power source.

Application

CD players, cassette recorders, radios, electronic games such as game boy, portable DVD players, LCD TV, digital cameras, camcorders, speed check scanners, map reading lights, and etc.

Safety Features & Approvals

- Short circuit protection
- Automatic thermal cut off
- Automatic overload cut off
- 2.0 Amp safety fuse
- CE Approval (EMC 55014)
- e-Mark Approval (e11 02 1523)

Features

- IC regulated switching mode DC converter
- 82% efficiency resulting cool running and less strain on car's electrical power source
- 11 - 30 VDC input voltages suitable for most truck and car
- 7 selectable regulated output voltages
- Quality 1,500mA available for the full range of regulated output voltages
- 7 sets of detachable plugs (polarity reversible) suitable for most portables
- LED power indicator



e-Mark

Input Voltage	: 11 to 30VDC (Negative earth)
Regulated output voltages	: Regulated at 1.5V, 3V, 4.5V, 6V, 7.5V, 9V and 12V (12V is regulated only when input voltage is higher than 16V)
Maximum output current	: 1800 mA
Continuous output voltages	: 1500 mA
Efficiency	: 82%
Indicator	: LED Power-On Indicator
Casing material	: Fire Retardant Poly-carbonate with soft resilient coating
Size and Net weight	: Length 100mm. Width 40mm. ; 100g
Lead wire	: 1.5M
Accessory	: 7 pieces of the most commonly used plugs.
Approvals	: e-Mark : e11 02 1523 , CE : EMC EN 55014

All values are based on the Standard ambient Temperature 25°C and Pressure 0.1Mpa.

** SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE **

• POWER TO PERFECTION • SAFETY BEYOND STYLE •

Description

This sleek robust high current car power adaptor offers a range of precise and clean DC outputs for most electronic, digital portables and power hungry PMP (Portable Multi-media Player) such as DVD player.

The microprocessor control (MCU) design provides accurate digital read outs of the vehicle's battery voltage, dynamic output load condition and selected output voltage.

The battery is protected from over-discharge by automatic low voltage cut off (battery power to load) and a warning buzzer to alert users .

User can select the back light color in the large LCD indicator at will to match the decor of the dash board to his or her taste.

One 5V 500mA USB port and a 3Amp selectable DC voltage output with several detachable plugs fit for most portables.

Features

- Microprocessor Control and Switching Mode designed Universal input (12V and 24 V battery system) for car and lorry.
- Large illuminated LCD display :
Accurately shows battery voltage,
Shows the selected output voltage
Shows how much current the load is drawing out of the 3 Amp adapter.
- Digital selection of regulated output voltage including a 5V.
(8 selections for 24V system and 7 selections for 12V system.)
- Automatic low battery voltage cut-off to protect battery from over discharge.
- Output over voltage cut off to protect voltage sensitive connected devices.
- Choice of 5 user selectable back- light colors
- Output short circuit and overload protection
- High temperature protection
- Input fuse protection

Specifications

- **Input DC voltage range :**
12V and 24V battery system.
- **Output regulated DC voltage selections :**
1.5/ 3 / 4.5/ 5 / 6 / 7.5 / 9 / 12V* dc
(12V regulated output is only for 24V battery system.)
- **Dual outputs :**
One DC Output, max. current 3,000 mA
One USB Port, max. current 500 mA.
- **The 3A DC output and the USB port can operate simultaneously.**

Accessories

Standard Accessories

- A. Input cable (1.5M) with cigarette plug.
- B. Output cable (1.5 M)
- C. 7 common DC plugs (polarity reversible)
- D. One set of dual lock sticker tapes.
- E. One spare 5A fuse
- F. One pouch for keeping all the accessories.

Optional Accessory

USB cable and 5 charge plugs for 5 popular cell phones.

Protections

- **Short circuit & overload protection**
By current limiting for both 3A and USB output
- **Thermal protection**
5 amp fuse in cigarette plug.
- **Low Battery Voltage Disconnect to protect battery from over-discharge**
This is an important function to prevent your car from stranding with a flat battery.
When the MCU of the unit detects the battery voltage is at critically low level, it will give both visual and audio warning and cuts all power to both 3A and USB outputs to stop further draining of battery power.
- **Over voltage (output) Protection**
This is to protect voltage-sensitive devices connected to the adapter.
When the MCU of the unit detects the battery voltage is at critically high level, it will give both visual and audio warning and cuts all power to both 3A and USB outputs.

Construction

- Anodized Aluminum alloy casing in standard color charcoal black.
 - Measurement : 98mm x 57mm x17mm
 - Net Weight of unit without accessories : 100gm.
 - 80 mm X 16mm LCD display
with 5 user selectable back light color
 - ** Digital read out of battery voltage and L, N, H icons ;
- | | 12V system | 24V system |
|-----------------------------|-------------|------------|
| L indicates | < 11.5 V | <23.0 V |
| N indicates battery voltage | 11.5 ~13.0V | 23.0~26.0V |
| H indicates battery voltage | > 13.0V | >26.0V |
- ** Digital read out of selected output voltage
 - ** Easy to spot bar chart , one bar = 500mA load.

CE
e-Mark

RoHS
COMPLIANT
2002/95/EC



Application

DVD player, i-Pod#, SONY PSP#, All portables with USB link cable for charge or power, all Portable Multi-media players with 3A max. load, GPS, handheld telecom.

Remarks : i-Pod#, SONY PSP# are registered trade marks and brands names of corresponding corporations.